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CONTRIBUTION TOWARDS OUR KNOWLEDGE OF THE SOUTH AFRICAN LYMANTRIADAE.

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THIS contribution is the result of my study of all the material belonging to this family from the collections of the Transvaal Museum, Natal and Durban Museums, Messrs. E. L. Clark and E. E. Platt (Durban), and my own. In many cases fine series were at my disposal, and these gave me a fair idea of the variability of some species.

Most of my attention has been given, however, to the structural characters, especially those useful for the definition of the genera.

I do not think that up to now much study has been made of the genera of this family, and, as will be seen from this paper, the most peculiar mistakes have been made in the generic identification.

It is also peculiar that, as far as I know, very little, if any, attention has been given to the process of the fore tibia, which processes are in all cases peculiar to the genus and often give clues to the affinity of some genera. I therefore figure this process in all genera, where necessary and possible of both sexes. The process is sometimes somewhat hidden in a groove of the tibia, and in such cases it has been drawn as if pulled out of the groove.

The study of the palpi also has been neglected, and I often found the third joint missing in certain groups of genera. This was noticed in *Orgyia antiqua* by Alfred Walter in 1885, but it seems that subsequent authors have made no use of this character.

The literature on the classification of the family is not very large; the most important are the following:—

Prof. Chr. Aurivillius: "Beitraege zur Kenntniss der Insektenfauna von Kamerun, Lepidoptera Heterocera," Arkiv för Zoologi, K. Svenska Vetenskap Akademien Bnd., II, No. 4, 1904. (This is perhaps the best attempt made to fix the limits of the different genera; the "key" to the genera, pp. 62-68, has been prepared with great care and was very useful to me in drawing up the "key" to the South African genera.)

Dr. *A. Jefferis Turner*: "A Classification of the Australian *Lymantriadae*," Trans. Ent. Soc., Lond., 1904, Part III. (This work has also been useful to me, but only six of the Australian genera occur also in South Africa.)

Sir *G. F. Hampson*: "The Fauna of British India," Vol. I, pp. 432-494, 1892; "The Moths of South Africa," Part III, Ann. S.A. Mus., pp. 390-412, 1905.

Col. *Charles Swinhoe*: "A Revision of the Old World *Lymantriadae* in the Nat. Coll.," Trans. Ent. Soc., Lond., 1903, Part III, pp. 375-498. (This paper, though useful for specific work, is useless for generic identification, as the author did not define the genera enumerated, and therefore makes it impossible for other workers to follow up his classification.)

For the study of genera represented in Europe a careful study has been made of the European genera representatives, as far as they were present in my collection.

Unless where otherwise stated, the descriptions of the genera are made of the type of each genus.

In the description of new species Ridgway's "Color Standards and Color Nomenclature," 1912, has been used, and the figure behind the colour indicates the plate of this most useful work. I think it a pity that so very little use is made by Lepidopterists of standard colours, which enable one to identify colours with certainty.

All measurements given in the specific description include the cilia, and are measured from tip to tip of the fore wings with the specimens set in the Continental way.

I also venture to give a phylogenetic table, showing the affinity of the South African genera, as I understand them.

I distinguish three distinct branches, of which *Bazisa* and *Redoa* are the most primitive, while the third form, from which the *Dasychira*- and *Lymantria*-branches have come, together with the ancestor of these three branches, are unknown to me.

The *Bazisa*-branch has the palpi with two joints only, but all its genera are very primitive in neuration; *Cimola* must have given rise to *Lepidopalpus* and *Olapa*—the former also has the process of the fore tibia two-jointed;* *Olapa* gave rise to *Pirga* and *Bracharoa*.

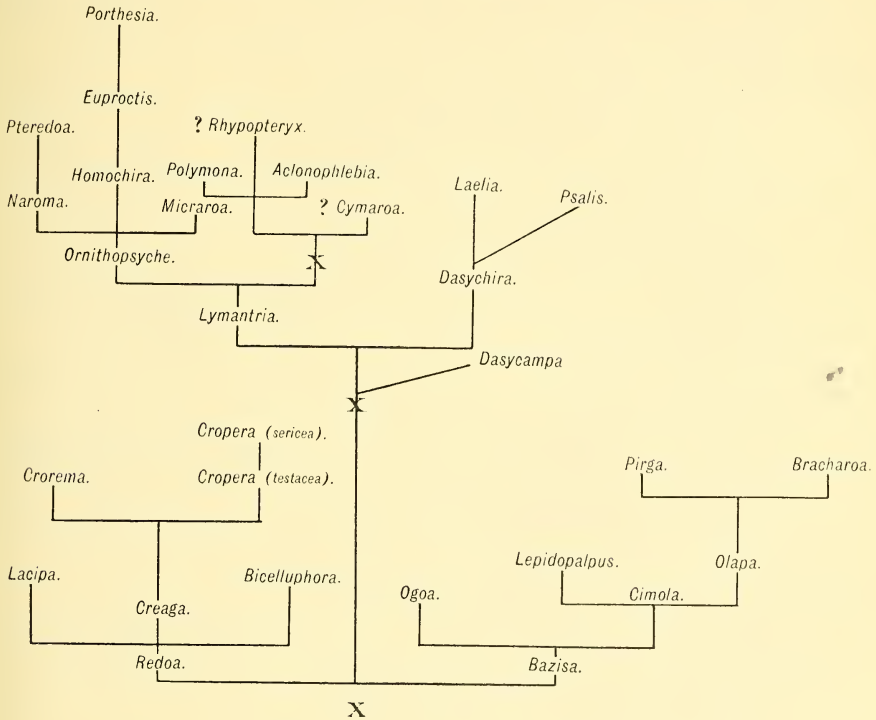
Redoa has three-jointed palpi, which become reduced in *Creaga* and all genera originating from this genus; the two branches, *Lacipa* and *Bicelliphora*, are most peculiar for their vein II of fore wing, which is free and from the upper median in all other genera of the South African *Lymantriadae*. The branches from *Creaga* come very close to each other.

The third branch is most developed specifically, many genera being very large.

The *Lymantria*-branch is best developed generically and contains genera of the highest development. It splits into two branches, the *Polymona-Aclonophlebia*-branch (near which come perhaps the two genera that I have not been able to study) and the *Ornithopsyche*-branch. From

* I cannot account for *Bazisa* having the process without this second joint.

this comes directly the peculiar genus *Micraroa*, and the *Homochira*- and *Naroma*-branches. *Pteredoa* develops from *Naroma*, while *Homochira* gives rise to *Euproctis*, from which comes the genus *Porthesia*.



KEY TO THE SOUTH AFRICAN GENERA.

1. a. Fore wing without an areole..... 2.
- b. Fore wing with an areole*..... 13.
2. a. Fore wing with vein 10 free out of upper median..... 3.
- b. Fore wing with vein 10 out of stalk of 8 and 9..... 4.
3. a. Hind wing with vein 6 and 7 stalked; 3 as far from 4 as 4 is from 5; vein 8 anastomosing with upper median; fore wing with stalk of 7 nearly half the vein in length..... 27. *Pteredoa*, p. 65.
- b. Hind wing with vein 6 and 7 from a point; vein 3 nearly twice as far from 4 as 4 is from 5; 8 touching upper median, but not anastomosing with it; fore wing with stalk of 7 over half..... 26. *Naroma*, p. 64.

* In *O. flabellaria* the areole may be absent; in *Bazisa* the areole is not quite closed.

4. a. Hind legs with four spurs..... 5.
 b. Hind legs with only two spurs..... 11.
5. a. Fore wing with vein 10 from stalk of
 7.8.9 before vein 7 6.
 b. Fore wing with 10 from stalk of 8.9
 beyond 7..... 7.
6. a. Hind wing with vein 6 and 7 separate,
 5 from well above lower angle; fore
 wing with 6 free, 11 anastomosing
 with 12..... 18. *Lymantria*, p. 44.
 b. Hind wing with 6 and 7 from a point,
 5 and 4 from lower angle; fore wing
 with 6 stalked with 7.8.9.10, 11
 free (?)...... 18. a. (?) *Cymaroo*,* p. 67.
7. a. Hind wing with vein 5 absent..... 25. *Porthesia*, p. 61.
 b. Hind wing with vein 5 present..... 8.
8. a. Hind wing with vein 4 and 5 from a
 point; fore wing with 6 stalked with
 7.8.9.10..... (?) 18. a. *Cymaroo*, p. 67.
 b. Hind wing with vein 5 well above the
 angle; fore wing with 6 not stalked
 with 7.8.9.10..... 9.
9. a. Fore wing with 10 from before half of 9;
 7 from near angle; 6 from far below
 the angle..... 21. *Ornithopsyche*, p. 48.
 b. Fore wing with 10 from well beyond
 half of 9; 7 on a long stalk with
 8.9.10; 6 from near angle..... 10.
10. a. Fore wing with vein 5 well above the
 angle; hind wing with 3 and 4 from
 angle or very shortly stalked..... 23. *Homochira*, p. 53.
 b. Fore wing with 5 from angle; hind
 wing with 3 and 4 on a stalk of $\frac{1}{6}$... 24. *Euproctis*, p. 54.
11. a. Cells of both wings open; fore wing
 with vein 7 absent; hind wing with
 3 absent; palpi with two joints only 22. *Micraroo*, p. 52.
 b. Cells well closed by discocellular; all
 veins present; palpi with three joints. 12.
12. a. Hind wing with vein 8 not quite touch-
 ing the upper median; 3, 4, 5 from
 nearly equal distances; fore wing
 with the stalk of 7 and 10 short;
 3rd joint of the palpi very thin.... 20. *Aclonophlebia*, p. 47.

§ 1. * I am not certain that this genus is placed correctly, as Hampson does not mention the position of vein 10 in fore wing; he places it near *Lymantria*, though, from the description, I think it may come near or between *Euproctis* and *Porthesia*.

- b. Hind wing with vein 8 touching the upper median at beyond $\frac{1}{2}$; vein 5 from well above the angle; 3 and 4 from the angle; 3rd joint of palpi thick. 19. *Polymona*, p. 46.
13. a. Fore wing with vein 11 originating free from the upper median. 15.
 b. Fore wing with 11 stalked with 10.9. 14.
14. a. Fore wing with 11 shortly stalked; areole short; hind wing with 3 and 4 stalked; 8 approaching, but not touching, the upper median at beyond $\frac{1}{2}$ 10. *Lacipa*, p. 17.
 b. Fore wing with vein 11 on a long stalk; areole very long; hind wing with 3 and 4 apart; 8 touching upper median at before $\frac{1}{2}$ 4. *Lepidopalpus*, p. 9.
15. a. Hind tibia with two spurs. 16.
 b. Hind tibia with four spurs. 21.
16. a. Hind wing with vein 6 and 7 on a stalk. 18.
 b. Hind wing with vein 6 and 7 not stalked. 17.
17. a. Hind wing with vein 3 and 4 from, and vein 5 from near, the lower angle; 6 and 7 from the upper angle; 8 touching the upper median; palpi three jointed. 14. *Dasycampa*, p. 25.
 b. Hind wing with vein 3 and 4 far apart; 5 from near 6; 6 and 7 far apart; 8 anastomosing with the upper median; palpi two jointed. 3. *Cimola*, p. 8.
18. a. Hind wing with 4 and 5 from the lower angle. 5. *Pirga*, p. 12.
 b. Hind wing with vein 5 from well above the angle. 19.
19. a. Fore wing with vein 11 anastomosing with 12; 4 and 5 stalked. 7. *Bracharoa*, p. 13.
 b. Fore wing with vein 11 free; 4 and 5 separate. 20.
20. a. Areole of fore wing very long; 10 from the areole a little beyond $\frac{1}{2}$; 8 of hind wing running along the upper median for a great length. 2. *Ogoa*, p. 8.
 b. The areole of the fore wing is short; 10 from areole near its end; hind wing with 8 just touching the upper median or connected with it by a bar (*O. flabellaria*). 6. *Olapa*, p. 11.

21. a. Hind wing with vein 6 and 7 apart.... 22.
 b. Hind wing with vein 6 and 7 from a point or stalked..... 23.
22. a. Areole rather short; 8 and 9 of fore wing anastomosing for a great length; bar of hind wing well before middle of upper median..... 12. *Cropera*, p. 21.
 b. Areole rather long; 8 and 9 not quite touching each other; bar of hind wing near middle of upper median... 1. *Bazisa*, p. 7.
23. a. Hind wing with vein 3 nearer to 4 than 4 is from 5, or even 3 and 4 from a point or stalked *..... 24.
 b. Hind wing with vein 3 as near to 4, or even farther away from 4, than 4 is from 5..... 27.
24. a. Vein 11 of fore wing anastomosing with the stalk of 9 and 10 to form a second areole..... 9. *Bicelluphora*, p. 16.
 b. Vein 11 of fore wing remains free..... 25.
25. a. Hind wing with vein 3 and 4 stalked; palpi with two joints only..... 17. *Psalis*, p. 43.
 b. Hind wing with vein 3 and 4 from a point; palpi with three joints..... 26.
26. a. Third joint of palpi long, visible without removing the hairs; process of fore tibia long and curved outwards.... 16. *Laelia*, p. 35.
 b. Palpi with the third joint very short and hidden in the hairs of the second joint; process of fore tibia short and not curved outwards..... 15. *Dasychira*, p. 27.
27. a. Hind wing with 6 and 7 from a point; 8 does not touch the upper median.. 12. a. *Cropera*, p. 21.
 b. Hind wing with 6 and 7 well stalked; 8 is touching the upper median or is connected with it by a bar..... 28.
28. a. Fore wing with vein 7 from before the end of the areole; areole long; palpi three jointed..... 8. *Redoa*, p. 15.
 b. Fore wing with vein 7 from the end of the areole, which is rather short; palpi two jointed..... 29.
29. a. Fore wing with vein 6 remote from the areole; hind wing with 5 from near the lower angle; 8 connected to the upper median by a bar..... 13. *Crorema*, p. 23.

* An exception to this makes the female of *Laelia figlina*.

- b. Fore wing with vein 6 from the areole ;
hind wing with 5 from well above the
lower angle ; 8 just touching the
upper median..... 11. *Creaga*, p. 20.

Genus BAZISA (pl. I, fig. 1).

Bazisa Wlk., Cat. XXXII, p. 398 (1865); type *detecta*.

Bazisa, Hmps., Ann. S.A. Mus. (1905), p. 393; type *melaxantha* (?).

Description from *perculata*.

♂. Proboscis absent; palpi short, a little beyond frons, about as long as eye, porrect, two jointed, covered with woolly hair; eye round, covered for nearly $\frac{1}{2}$ its width by a tuft of long hair, small, a little over $\frac{1}{2}$ the width of frons; antennæ bipectinate, shaft curved, branches 8 times thickness of shaft, ending in 2 bristles and forming on inner side a straight line, except at tip, where it is curved a little inwards, basal joint with a short hair-tuft; fore tibia with a process as long as the tibia and ending in a curved point; mid tibia with 1 pair of spurs; hind tibia with 2 pairs, which are quite close together; tarsae of all legs with very short hair; abdomen just beyond the hind wings.

Fore wing semicircular; costa nearly straight; termen, inner margin, apex, and tornus very much rounded; vein *1b* simple at base; 2 from $\frac{2}{3}$ lower median; 3 from beyond $\frac{5}{6}$; 4 from lower angle; 5 from well above the angle; discocellular between 5 and 6 indistinct, angled inwards; 6 from well below upper angle; 7 and 8 from upper angle on a stalk of nearly $\frac{1}{3}$; 9 and 10 on a little longer stalk and from before $\frac{2}{6}$ upper median; 9 curved so as to approach 8, but in none of the seven specimens I examined do they touch and form an areole; 11 free from $\frac{2}{3}$ upper median; 12 nearly straight.

Hind wing sub-triangular; large; with the costa, termen, and inner margin somewhat rounded; the apex and tornus much rounded; a distinct rounded lobe at vein *1b*; vein *1a* long; *1c* represented by a short vein; 2 from $\frac{2}{3}$ lower median; 3 from beyond $\frac{5}{6}$; 4 from lower angle; 5 almost the same distance from 4 as 4 is from 3; discocellular between 5 and 6 faint and angled inwards; 6 from well below upper angle; 7 from angle; 8 bent at before $\frac{1}{2}$ upper median and both veins producing a prominence that suggests a bar, to connect the two veins.

The only species known to me is *perculata* Dist., which is placed by Sir Hampson in this genus, though he sinks this genus as a synonym of *Aroa* in his "Moths of India," p. 439. The type of this genus as described by Walker is *detecta*, which Hampson sinks as a synonym of *pyrrhochroma*, and not *melaxantha* as stated by Hampson in his "Moths of South Africa," p. 393. Aurivillius, *l.c.* p. 67, places *perculata* in *Cropera*, from which it differs, however, in the imperfectness of the areole, and, as this character seems to be constant and is a very primitive character, I think it sufficient to keep this genus distinct from any others. Moreover, it differs also in the palpi and the process of the fore tibia. I also find that Walker wrote the name *Bazisa*, and not *Baziza* as given by Hampson.

Bazisa perculata, Dist., A. M. N. H. (6), XX, p. 201 (1897).

I have seen this species from—

Pietpotgietersrust (XI, Burn).

Waterval (Zoutpansberg District) (XI, Janse).

Pretoria (II, Janse).

Rietfontein No. 57 (XII, Janse).

Genus OGOA (pl. I, fig. 2).

Ogoa Wlk., Cat. VII, p. 1764 (1856); type *simplex*.

♂. Proboscis very short; palpi short, two jointed, porrect, just reaching frons; eyes $\frac{1}{2}$ width of frons; antennæ bipectinate; the branches 6 to 7 times the base of the shaft and gradually getting shorter towards apex, each ending in 2 to 4 bristles; in ♀ the branches are only $\frac{1}{2}$ the length of those of the ♂; fore tibia in both sexes with a process on inner side, nearly as long as the tibia, covered with long hair and ending in a long tuft of hair; mid and hind tibiae with 2 short spurs only; tarsae with short smooth hairs; abdomens as long as hind wings.

Fore wing long, triangular; costa arched; outer margin slightly hollowed out; inner margin somewhat rounded; apex and tornus well rounded; 1*b* simple at base; 1*c* faintly represented; 2 from just beyond $\frac{1}{2}$ of lower median; 3 from middle of 2 to 4; 4 from lower angle; 5 from well above the angle; 6 from a little below upper angle; discocellular faint; cell nearly $\frac{2}{3}$ of wing; 7 and 8 on a stalk of $\frac{1}{2}$ 7 and from upper angle; 9 and 10 on a stalk of $\frac{1}{2}$ 9 from over $\frac{7}{8}$ of upper median; 9 bent towards 8 and anastomosing with it to form an areole about 5 times longer than broad; 11 from $\frac{3}{4}$ of upper median; 12 nearly straight.

Hind wing triangular; costa nearly straight; outer and inner margin rounded; apex rounded; tornus forming a rounded lobe at 1*b*; 2 from a little beyond $\frac{1}{2}$ of lower median; 3 from $\frac{3}{4}$; 4 from the lower angle; 5 from $\frac{1}{3}$ of discocellular, which is angled at middle; 6 and 7 on a stalk of $\frac{1}{4}$ 6 and from upper angle; 8 approaching and touching beyond $\frac{1}{2}$ the upper median for a great length, but not anastomosing with it.

Ogoa simplex Wlk., Cat. VII, p. 1764 (1856).

Hmps., Ann. S.A. Mus., p. 391 (1905).

Hab. Durban (II, X, Leigh).

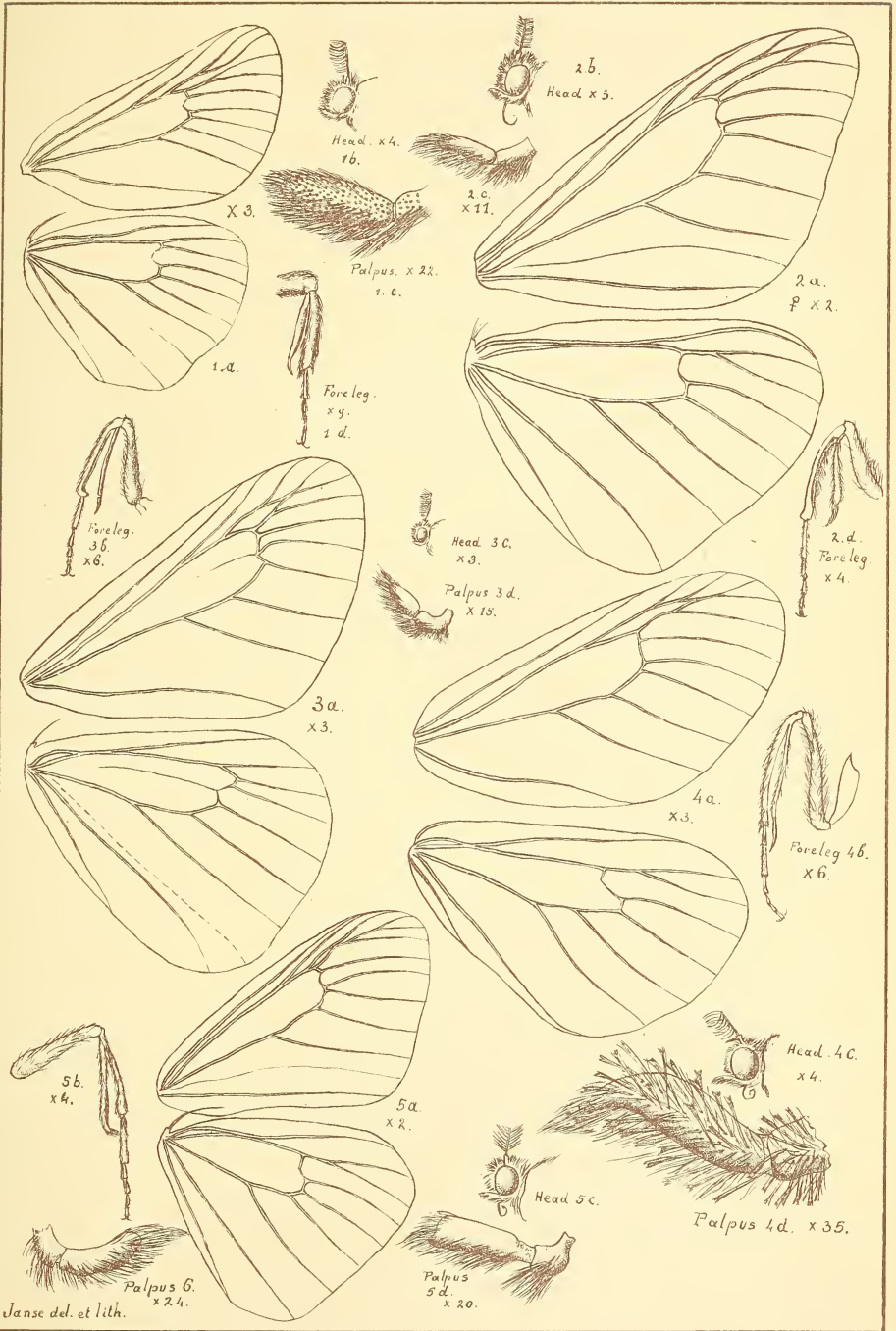
Ngqeleni, Pondoland (I, Swinny).

Estcourt.

Genus CIMOLA (pl. I, fig. 3).

Cimola Wlk., Cat. IV, p. 817 (1855); type *opalina*.

♂. Proboscis absent; palpi just to frons, porrect or even drooping; eyes small, about $\frac{1}{4}$ width of head; antennæ bipectinate, curved; branches about 10 times base of shaft, shorter towards base and apex and each ending in 2 bristles; fore tibia with a process on inner side which is a little longer than the tibia and apparently two jointed, a little curved at



1. *Bazisa perculata*, Dist. ; 2. *Ogoa simplex*, wik ♀ ; 3. *Cimola opalina*, wik ♂ ;
 4. *Lepidopalpus hyalina*, nov. spec. ♂ ; 5. *Olapa furva*, Hmpsn. ♂ ;
 6. Palpus of *O. nigricosta*, Hmpsn. ♂ .

the end; mid tibia without spurs; hind tibia with 2 spurs only; tarsae with smooth, rather long hair; abdomen of ♂ about $\frac{2}{3}$ of hind wing.

Fore wing triangular, with costa straight; inner and outer margin evenly, but slightly, arched; apex and tornus much rounded; vein *1b* simple at base; 2 from a little beyond $\frac{1}{2}$ of lower median; 3 from middle of 2 and 4; 4 from lower angle; 5 from a little below middle of discocellular, where also a short veinlet is given off into the cell; discocellular a little angled at vein 5; cell over $\frac{2}{3}$ of wing; 6 from below upper angle; 7 and 8 on a stalk of $\frac{1}{4}$ of 7 and from upper angle; 9 and 10 on a stalk of nearly $\frac{1}{2}$ 9 and from upper median at $\frac{5}{6}$; 9 much curved towards 8 and anastomosing with 8 for a short distance just above free part of 8 and 9, thus forming a large areole, which is 3 times longer than broad; 11 from $\frac{2}{3}$ upper median and parallel to 12; 12 straight.

Hind wing ample, triangular; costa and outer margin nearly straight; inner margin a little arched; apex well rounded; tornus forming a rounded lobe from *1b* to 2; *1a* straight, moderate; *1b* curved; a trace of *1c*; 2 from a little beyond $\frac{1}{2}$ lower median; 3 a little beyond $\frac{2}{3}$; 4 from angle; discocellular sharply angled at middle of 4 and 5 and emitting a distinct veinlet into the cell; cell $\frac{2}{3}$ of wing; 5 from near 6; 6 from upper angle; 7 from upper median at $\frac{9}{10}$; 8 anastomosing at $\frac{1}{4}$ with upper median for a short distance, then straight and diverging.

Cimola opalina Wlk., Cat. IV, p. 817 (1855).

I have seen this species from—

Durban (IV, Ross) (I).

Pinetown (III, Leigh).

Tongaat.

Ngqeleni (VIII, I, Swinny).

Genus LEPIDOPALPUS, nov. (pl. I, fig. 4).

Type *hyalina*, nov. spec.

♂. Proboscis very short, but visible; palpi short, just beyond frons and about as long as the eye, porrect; second joint about 4 times longer than first joint; third joint minute; first joint covered with bi-lobate scales; second joint with tri-lobate scales and some hairs; eyes large, about width of frons, round; frons thinly covered with hairs; antennæ curved, bipectinate; branches long in middle, about 8 times shaft and ending in 2 bristles, they gradually get shorter towards both ends so as to form a straight line on inner side; basal joint with a rather long tuft of hair; fore tibia with a process longer than the tibia and *apparently* made of two joints, the last joint $\frac{1}{4}$ of the first and curved, so as to project well beyond the tibia on outer side; mid and hind tibia with 2 moderate spurs of equal length; tarsae covered with short hairs; abdomen as long as hind wing.

Fore wing sub-triangular; costa gently arched; termen and inner margin well rounded; apex and tornus much rounded; *1b* simple at base; 2 from a little beyond $\frac{1}{2}$ of lower median; 3 from $\frac{1}{2}$ the distance 2 to 4;

4 from lower angle; 5 from well above angle; discocellular rounded; cell less than $\frac{2}{3}$ of wing; 6 from a little below upper angle; 7 and 8 on a stalk of $\frac{1}{3}$ of 7, and originating from upper angle; 9, 10, and 11 stalked and from $\frac{3}{4}$ upper median; 11 given off at $\frac{1}{3}$ of 9; 10 from before $\frac{2}{3}$; 9 anastomosing with 8 at $\frac{2}{3}$ of 9 to form a long areole, which is about 6 times longer than broad; 12 parallel to upper median.

Hind wing sub-triangular; costa almost straight; termen, apex, and tornus much rounded; inner margin slightly hollowed out at lower half; vein *1a* very short and straight; *1b* somewhat curved; 2 from before $\frac{2}{3}$ lower median; 3 from middle of 2 and 4; 4 from lower angle; 5 from $\frac{1}{3}$ discocellular, which is angled inwards and oblique; 6 and 7 on a stalk of $\frac{1}{3}$ of 7 and from upper angle; 8 slightly anastomosing with upper median or just touching it quite near base, then straight; frenulum absent in the four specimens I have seen, but in the wing preparation there is a short, but distinct, vein at the base near costa, which suggests an undeveloped frenulum, retinaculum absent in the ♂♂.

I do not know any African genus to which this one comes near, though it differs least from *Olapa*. From this genus it is distinct in having 11 and 10 stalked, in the hind wing having the connection of 8 with the upper median near base, by its two-jointed process on the fore tibia and the absence of the frenulum, while the palpi have three joints, though the last joint is very minute. Sir Hampson mentions in "Moths of India," Vol. I, p. 489, that the South American species of the genus *Caviria* has the veins 9, 10, and 11 of fore wing as in *Lepidopalpus*, but there the frenulum is present, and the fore wing has 6 and 7 from angle and the hind wing has 4 and 5 from the lower angle.

The species *hyalina* is very much like *Redoa melanocraspis*, from which it differs, however, in the stalked veins 9, 10, and 11 and in the absence of the frenulum. It is also very much like *Olapa nigricosta*, but is distinguished at once from that species by its 4 spurs and the other characters by which it differs from *melanocraspis*.

I hardly think this genus a direct development of *Cimola*.

Lepidopalpus hyalina, nov. spec. (pl. III, fig. 15).

♂. Head, frons, branches of antennæ, thorax, and abdomen whitish; shaft of antennæ white; palpi white with a black tip and some black scales mixed with the white hairs at first and second joints above and at the sides; fore legs white with black hairs on femora above and on tibiæ on inner sides and a black streak on inner side of tarsæ; mid and hind legs white; fore and hind wings pure white, semi-transparent; fore wing with thick black scales and hairs at costa, forming a streak from base to $\frac{1}{4}$ of costa; cilia white; under side of wings white, more hyaline than above.

Exp. 32.4 mill. in type; 30–34.6 mill. in co-types.

Hab. Ngqeleni (21.3.04, Swinny), in coll., Janse, type.

Ngqeleni (11.1.04, Swinny), co-type in coll., Transv. Mus.

Durban (15.2.09, E. L. Clark), co-type in coll., Janse.

Durban, one specimen partly used for preparation.

Genus OLAPA (pl. I, fig. 5; pl. II, fig. 1).

Olapa, Wlk., Cat. IV, p. 823 (1855). type *flabellaria*.

Antiphella, Wlk., Cat. VII, p. 1743 (1856). type *flabellaria*.

Hampson, Ann. S.A. Mus., p. 391 (1905).

My specimens of *flabellaria* (teste Hmpsn.) has no areola, but vein 10 from upper median. Out of ten specimens nine had no areole, and the areole formed in the remaining specimen is not quite the same as in other species of *Olapa*, as it is formed by a bar between vein 10 and the stalk of 9 and 8, while in all other species it is formed by the anastomosing of 10 with stalk of 7, 8, 9 at $\frac{1}{2}$. *O. flabellaria* differs also in several other respects; the second joint of the palpus is much smaller and bluntly pointed; the process of the fore tibia is short; vein 3 of hind wing is from $\frac{1}{2}$ the distance of 2 to 4; while 5 is from closer to the lower angle and the discocellular is longer and more oblique; 8 is connected with the upper median by a bar and not touching it, as in the typical *Olapa*.

It may be that *flabellaria* is the highest development of the genus and has to be separated from the others; provisionally I leave in the genus.

In describing the genus *Olapa*, I use *furva* as a type, which I consider most typical to the genus.

Proboscis very short; palpi short, porrect, not reaching beyond frons, two jointed, of which the second joint is obtuse, cylindrical, and about 2 times as large as the first joint; eyes not quite $\frac{1}{2}$ width of head, rounded; antennæ bipectinate, branches about 10 times thickness of base of shaft and gradually getting shorter towards apex, ending in 2 or 3 bristles; at base a tuft of hairs; branches in ♀ only 2 times base of shaft; fore tibia in ♂ with a long process, curved towards the outside beyond the length of the tibia; in ♀ simple (except in *O. flabellaria*, where the ♀ has a thin short process); mid and hind tibiae with 2 moderate spurs; tarsae with short, smooth hairs; abdomen in ♂ not quite as long, in ♀ just as long as hind wings.

Fore wing shortly triangular; costa and outer margin a very little arched; inner margin nearly straight; apex and tornus well rounded; vein 1b simple at base; 1c faintly represented; 2 from before $\frac{2}{3}$ lower median; 3 from $\frac{2}{3}$ vein 2 and angle; 4 from lower angle; 5 from well above the angle; discocellular between 5 and 6, faint and curved inwards; cell nearly $\frac{2}{3}$ of wing; 6 from a little below upper angle; 7 and 8 on a stalk of $\frac{1}{3}$ 7, and from upper angle; 9 and 10 on a stalk of $\frac{1}{3}$ 10 and from beyond $\frac{7}{8}$ upper median; 9 just as it leaves 10, anastomosing with stalk of 7 and 8 at $\frac{1}{2}$, till nearly $\frac{1}{2}$ length of 8, so as to form the areole; at first sight it looks as if 10 anastomoses with stalk of 7, 8, 9 in forming the areole; 11 from $\frac{5}{6}$ upper median and parallel to 10; 12 parallel to costa for a great length.

Hind wing broad, triangular; costa, outer and inner margins almost straight; apex and tornus well rounded; a very small rounded lobe at 1b; 1a long and straight; 1b straight; 2 from before $\frac{2}{3}$ lower median; 3 from $\frac{2}{3}$ distance 2 to 4; 4^o from lower angle; 5 from $\frac{1}{3}$ discocellular, which is oblique and angled inwards at $\frac{2}{3}$; cell over $\frac{1}{2}$ the wing; 6 and 7

from upper angle and on a stalk of $\frac{1}{3}$ of 6; 8 touching upper median at $\frac{1}{2}$, but not anastomosing with it.

In one specimen of *O. nuda* I find that the right fore wing has 10 free, and thus forms no areole, while the other wing is quite normal; its hind wing has vein 5 nearer to 4 than 4 is to 3, and the stalk of 6 and 7 is not quite as long as normally. In *O. nigricosta* the free part of 7 and 10 comes from $\frac{3}{4}$ of the areole, and thus places it near the genus *Pirga*, from which it differs, however, in the shorter stalk of 6 and 7 of the hind wing.

- | | | |
|-------|---|----------------------|
| 1. a. | Both wings white..... | <i>nigricosta</i> . |
| | b. Wings not white..... | 2. |
| 2. a. | Veins of fore wings dark..... | 3. |
| | b. Veins of fore wing of ground colour..... | <i>flabellaria</i> . |
| 3. a. | Fore wing with scaling rather dense; ground colour of both wings maize yellow (IV); hind wing with the veins rather light..... | <i>furva</i> . |
| | b. Fore wing with the scaling rather thin; ground colour of both wings cream colour (XVI); veins of hind wing almost as dark as in fore wing..... | <i>nuda</i> . |

Olapa furva, Hmpsn., Ann. S.A. Mus., p. 391 (1905).

Hab. Krabbefontein (Dr. H. G. Breyer).

Chilovane (Rev. Junod).

Olapa nigricosta, Hmpsn., Ann. S.A. Mus., p. 392 (1905).

Hab. Port St. Johns (4.3.08, 27.8.08, Swinny).

Ngqeleni, Pondoland (10.3.04).

Eshowe, Zululand (II).

Olapa nuda, Holl., "Don. Smith's Travels," p. 409, pl. fig. 5 (1897).

Hmpsn., Ann. S.A. Mus., p. 391 (1905).

Hab. Waterberg (27.12.08, A. T. Cooke).

Olapa flabellaria, Fab., Mant. Ins., II, p. 188 (1787).

Liparis crocicollis, Herr., Schäff, Aussereur. Schmett., f. 110 (1854).

Olapa temporata, Wlk., Cat. IV, p. 823 (1855).

Antiphella vecontia, Druce, A. M. N. H. (7), III, p. 469 (1899).

Hmpsn., Ann. S.A. Mus., p. 391 (1905).

Hab. Barberton (Jan., 1911, Janse) (II, J. F. Jeffery).

Durban (III, A. Ross).

Estcourt.

Genus *PIRGA* (pl. II, fig. 2).

Pirga, Auriv., Entomologisk Tidskrift, p. 192 (1892)... type *mirabilis*, Auriv.

Description made from *Pirga transvalensis*, nov. spec.

♂. Proboscis short; palpi short, porrect, two jointed; second joint 2 times longer than first joint, rather thin and bluntly pointed, covered with some hair underneath and at tip; eyes round, large, of width of

frons; frons rounded, with few hairs; antennæ less than $\frac{1}{2}$ of costa, bipectinate, curved; basal joint with a slight tuft; branches about 8 times shaft, ending in 1 long and 1 short bristle; fore legs missing in my specimen; mid and hind tibiae with terminal spurs only; legs with thin hairs; thorax and abdomen thinly covered with hair; abdomen about $\frac{2}{3}$ of inner margin of hind wing.

Fore wing sub-triangular; costa slightly arched; termen rounded; inner margin straight; apex and tornus rounded; 2 from beyond $\frac{1}{2}$ lower median; 3 from beyond $\frac{1}{2}$ of 2 to 4; 4 from lower angle; 5 from a little above the angle; discocellular faint; cell over $\frac{1}{2}$ length of wing; 6 from below upper angle; 7 and 8 on a stalk of $\frac{1}{3}$ 7 and from upper angle; 9 and 10 on a stalk of $\frac{1}{2}$ 10 and from beyond $\frac{2}{6}$ of upper median; stalk of 9 and 10 and vein 9 for $\frac{1}{2}$ its free length anastomosing with upper part of stalk of 7 and 8, and with 8 for nearly $\frac{1}{2}$, so as to form an areole which is shorter than the length of each of the two stalks; 11 from $\frac{3}{4}$ upper median and nearly parallel to 12; 12 parallel to costa for over $\frac{3}{4}$.

Hind wing sub-triangular; costa and inner margin slightly hollowed out; termen well rounded; apex and tornus much rounded; a small lobe at vein 1b; vein 1a very long and a little curved; 1b straight; 1c faintly represented; 2 from well beyond $\frac{1}{2}$ lower median; 3 from beyond $\frac{1}{2}$ 2 to 4; 4 and 5 from lower angle; discocellular oblique, faint and angled at $\frac{3}{4}$; 6 and 7 on a stalk of $\frac{1}{2}$ 6 and from upper angle; 8 touching upper median at before $\frac{1}{2}$, where the latter is bent, but not anastomosing with it.

Though I have not seen any other species of this genus, the description given by Prof. Aurivillius is sufficiently minute to guarantee the correctness of the generic identification. Only one species is known to me, and that appears to be undescribed.

Pirga transvalensis, nov. spec. (pl. III, fig. 1).

Hairs of head, palpi, thorax and abdomen above and underneath, and legs cream buff (XXX); shaft and branches of antennæ black; wings hyaline, sparsely covered with cream-buff hairs, that stand thickest and are longest near base and inner margin of hind wing; all veins, termen and apex of both wings, costa of fore wing, and tornus and inner margin of hind wing mummy brown (XV); hind wing with the hairy covering a little thicker than on fore wing; cilia cream buff.

Under side as above.

Exp. 32.8 mill.

Hab. Kalkbank (Zoutpansberg District) (II, Mr. P. Kat). Only one specimen in coll., Janse.

Genus BRACHAROA (pl. II, fig. 3).

Bracharoa Hmpsn., Ann. S.A. Mus., p. 392 (1905).

Type *quadripunctata*, Willgrn.

♂. Proboscis absent; palpi a little beyond frons, two jointed; second joint short and broad, about as long as first joint, somewhat pointed and covered above, on under side, and at sides with rather long hair; eyes $\frac{1}{3}$ width of frons; antennæ bipectinate; branches about 8 times base of

shaft, which is curved; branches gradually shorter towards base and apex, so as to form a straight line on under side; each branch usually ends in 2 bristles; fore leg with a hairy process on inner side, as long as the tibia; tibia with a short claw on outer side; mid and hind tibiae with 2 short spurs only; tarsae hairy; abdomen shorter than hind wings, without any tuft and, like the thorax, clothed with long hair.

Fore wing broad, triangular, with a nearly straight costa; inner margin slightly arched at termen; apex rounded; tornus a little rounded; 2 from $\frac{2}{3}$ lower median; 3 from a little before lower angle; 4 and 5 stalked for nearly $\frac{1}{2}$ 4, stalk from lower angle; discocellular angled at middle and with a short veinlet from the angle into the cell; cell over $\frac{1}{2}$ the wing; 6 from well below upper angle; 7 and 8 stalked till beyond $\frac{1}{4}$ of 7, stalk from upper angle; 9 and 10 stalked for about the same length and from upper median at $\frac{7}{8}$; 9 bending to stalk of 7-8 and anastomosing with the free part of 8 for about $\frac{1}{2}$ length of 8, so as to form an areole about 3 times longer than broad; 11 from upper median at $\frac{2}{3}$ and anastomosing at $\frac{1}{3}$ for its whole length with 12, which otherwise runs parallel to the costa.

Hind wing triangular and large; costa straight; termen rounded and with a small lobe at 2 to 3, and 1b to 1c; inner margin much rounded at middle; apex and tornus well rounded; 1a long and curved; 1b straight; 1c faintly represented; 2 from beyond $\frac{1}{2}$ the lower median; 3 from beyond $\frac{3}{4}$ 2 to 4; 4 from lower angle; 5 as far from 4 as 4 is from 3; discocellular only represented as a veinlet into the cell for $\frac{1}{2}$ its length, beginning at vein 5; 6 and 7 on a stalk of about $\frac{1}{2}$; 8 anastomosing with the upper median at before $\frac{1}{2}$ for a short distance. Aurivillius, in his "Key," *l.c.* p. 67, states that the two species, *quadripuncta* and *dregei*, have to come in the genus *Orgyia* Ochs., but after examining *O. antiqua*, the type of the genus, I found that *Bracharoa* differs from *Orgyia* in many respects. *Bracharoa* has no abdominal tuft; *Orgyia* has vein 11 quite free, while 7 and 8 of same wing are on a very short stalk and veins 4 and 5 are quite separate and rather far apart at origin. The hind wing of *Orgyia* is distinctly closed by a transverse vein, originating from about $\frac{2}{3}$ of the veinlet in the cell.

It is true, however, that *B. dregei* is not quite a typical *Bracharoa*, as it has also vein 11 of fore wing free and veins 7 and 8 on a shorter stalk, but otherwise it agrees with the structural characters of *quadripuncta*, and is more a *Bracharoa* than an *Orgyia*.

I consider *Bracharoa* as a development of *Orgyia*. *Orgyia* has no representatives in South Africa as far as I know.

1. a. Ground colour of fore wing light orange-yellow (III);

hind wing with terminal area fuscous..... *quadripuncta*.

b. Ground colour of fore wing cinnamon-buff (XXIX);

hind wing entirely suffused with fuscous..... *dregei*.

Bracharoa quadripuncta, Wilgrn., Öfv. Vet. Ak. Förh., p. 99 (1875).

Aroa bistigmigera, Butl., P. Z. S., p. 847 (pl. CLII, fig. 7) (1896).

Hmps., Ann. S.A. Mus., p. 392 (1905).

Hab. Pretoria (IX, II, Janse; III, Swierstra; Dr. Breyer).

Potchefstroom (X, Miss Lion-Cachet).

Barberton (IV, Miss De Beer).
 Three Sisters (X, Miss V. Snooke).
 Pietersburg (XI, Janse).
 Waterval, *Zoutpansberg District* (XI, Janse).
 Shilouvane, *Zoutpansberg District* (X, Rev. Junod).
 Stanger, Natal (IV).
 Eshowe (XI).
 Estcourt.

Bracharoa dregei, Herr Schöff., *Aussereur. Schmett.* (fig. 114) (1854).

Hmpsn., *Ann. S.A. Mus.*, p. 392 (1905).

Hab. Caledon District (X, Lightfoot).

Capetown (III, IV, Lord Gladstone).

Genus REDOÄ (pl. II, fig. 4).

Redoä Wlk., *Cat. IV*, p. 826 (1855) type *submarginata*.

Hmpsn., *Ann. S.A. Mus.*, p. 393 (1905).

Description made from *melanocraspis*.

♂. Proboscis very rudimentary; palpi just to frons, oblique; third joint almost porrect; second joint about 2 times first joint; eyes moderate, a little less than greatest width of frons; frons with a slightly rounded prominence and covered with short hair; antennæ somewhat curved, bipectinate; branches long, about 8 times shaft and ending in 2 bristles; basal joint large and with a short tuft of hair; fore tibia with a process on inner side, a little longer than the tibia and apparently made of two joints, first joint nearly as long as tibia and the second joint curved, so as to point outwardly; mid tibia with 2 terminal spurs of nearly the same length; hind tibia with 2 pairs of spurs, of which the first pair is usually shorter; tarsae covered with short smooth hair; abdomen shorter than hind wing.

Fore wing triangular; costa and inner margin slightly rounded; termen, apex, and tornus much rounded; *1b* simple at base and curved; 2 from beyond $\frac{2}{3}$ lower median; 3 from beyond $\frac{1}{2}$ 2 to 4; 4 and 5 from lower angle; discocellular sharply angled inwards at $\frac{1}{2}$ and with a trace of a veinlet in cell; cell more than $\frac{1}{2}$ of wing; 6 from well below upper angle; 7 and 8 on a stalk of nearly $\frac{1}{3}$ of 7, and from upper angle; 9 and 10 on a stalk of over $\frac{1}{2}$ of whole length of 9, and from beyond $\frac{3}{4}$ upper median; 9 anastomosing with 8 shortly after it comes from the stalk* for about $\frac{1}{2}$ the remainder length, so as to form a very long areole, about 7 times longer than broad; 11 from upper median at $\frac{2}{3}$ and parallel to 12; 12 straight.

Hind wing sub-triangular; costa and inner margin nearly straight; termen with a large rounded lobe at from vein 2 to 5; apex and tornus much rounded; *1a* long, slightly curved; *1b* long; *1c* faintly represented; 2 from $\frac{2}{3}$ lower median; 3 from beyond $\frac{1}{2}$ 2 to 4; 4 from the angle; 5 from $\frac{1}{3}$ discocellular, which is oblique and much angled inwards

* In one specimen 9 anastomoses at once as it comes from 10.

at $\frac{2}{3}$, where it also emits a veinlet into the cell; 6 and 7 on a stalk of $\frac{1}{4}$ 7 and from upper angle; 8 much curved towards upper median at $\frac{1}{3}$ and anastomosing with it for a very short distance; cell nearly $\frac{2}{3}$ of wing.

Redoa melanocraspis Hmps. n., Ann. S.A. Mus., p. 393 (1905).

I have seen this species from—

Port St. Johns (III, IV, XII, Swinny).

Ngqeleni (V, Swinny).

Zululand (XI, XII, Wichgraf).

Eshowe, Zululand (II).

Durban (II, E. L. Clark).

Pinetown (I, Leigh).

Tongaat.

Estcourt.

Pietermaritzburg (XII).

Genus **BICELLUPHORA**, nov. (pl. II, fig. 5).

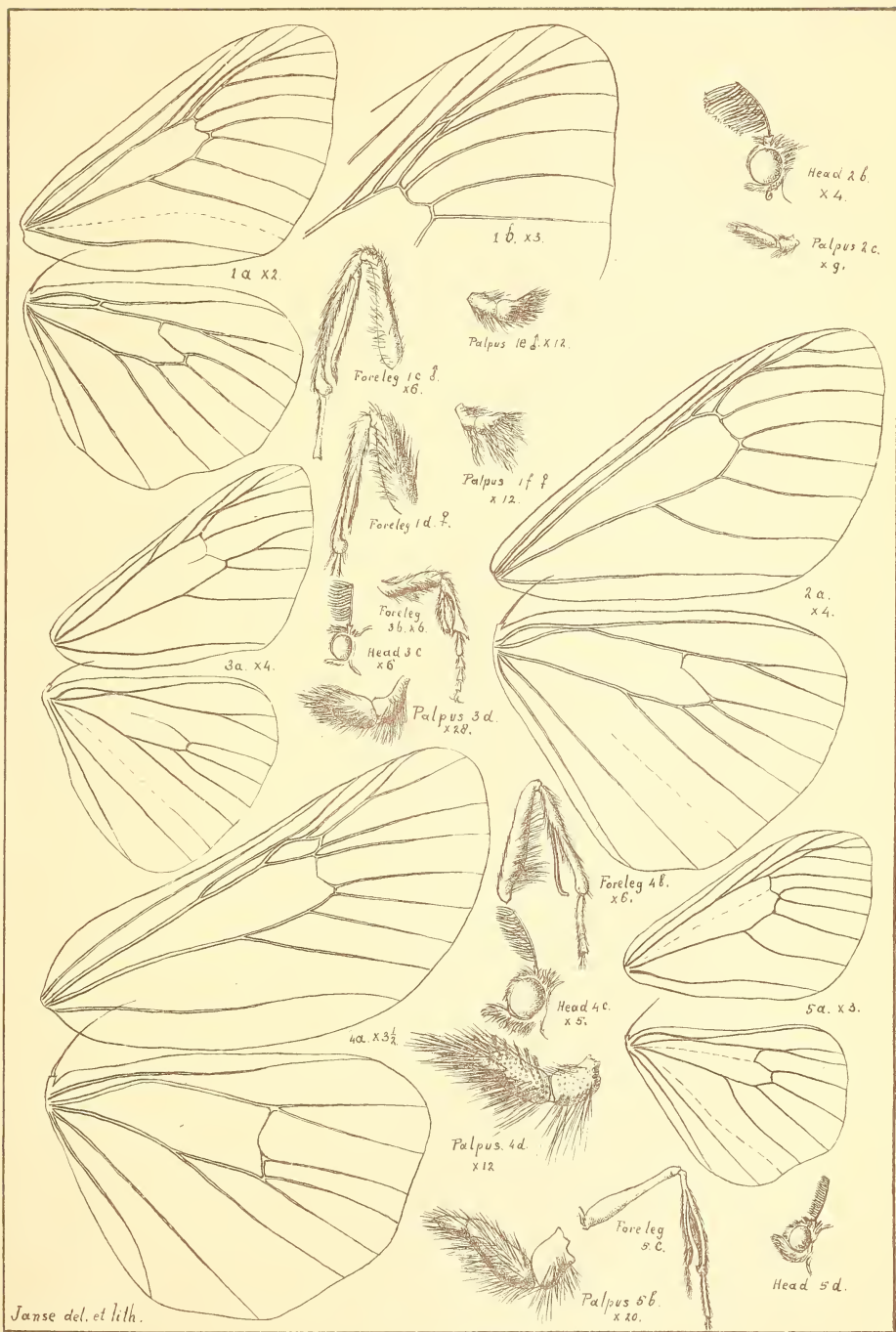
Type *argentea*, nov. spec.

♂. Proboscis absent; palpi short, just beyond frons, slightly ascending, two jointed; second joint about $\frac{1}{2}$ as long as first, cylindrical and ending in a contracted point that suggest, or even may be, the third joint; both joints covered with long hair, which in second joint underneath and at tip also above are mixed with scales; eyes large, of width of frons, round; frons flat; antennæ about $\frac{1}{2}$ the costa of fore wing, bipectinate; basal joint with a small tuft of hair; shaft curved; branches 4 times shaft, not ending in spines; thorax clothed with hair; abdomen covered with short hair and (probably) * without tufts; legs covered with scales and long hair; fore leg with a thin process, somewhat curved terminally; mid tibia with 2 spurs; hind tibia with 4 spurs.

Fore wing elongated; costa slightly hollow at middle; termen very oblique and as much rounded as the inner margin; apex and tornus much rounded; 1b simple at base; 2 from $\frac{2}{3}$ lower median; 3 from well beyond $\frac{1}{2}$ the distance of 2 to 4; 4 from lower angle; 5 from a little above the angle; discocellular angled at middle; cell nearly $\frac{2}{3}$ of wing; 6 from below upper angle; 7 and 8 on a very short stalk and from upper angle; 9 and 10 on a stalk of $\frac{1}{3}$; 10 originating from a little beyond $\frac{3}{4}$ upper median; 9 shortly after coming from 10 anastomoses at a little above 7 with 8 for about $\frac{1}{2}$ its free length, thus forming the areole; 11 from beyond $\frac{1}{2}$ upper median, curved and anastomosing with stalk of 9-10 at $\frac{1}{2}$ where that stalk is well bent, then running parallel to 10, thus a second areole is formed; 12 nearly straight.

Hind wing broad; costa gently arched; termen lobed at 2 to 5; inner margin lobed at 1a; apex rounded; tornus slightly lobed; 1a curved; 1b straight; 2 from beyond $\frac{1}{2}$ lower median; 3 and 4 from angle; 5 from nearly $\frac{1}{3}$ discocellular and rather faint; discocellular faint; cell over $\frac{1}{2}$ of wing; 6 and 7 very shortly stalked and from the upper angle; 8 curved

* The abdomen is somewhat rubbed in the only specimen I have seen.



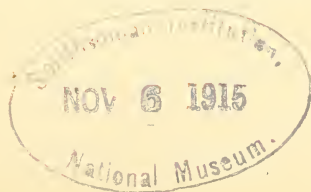
1. *Olapa fiabellaria*, Fabr. ♂; 2. *Pirga transvalensis*, nov. spec. ♂;
 3. *Bracharoa quadripunctata*, Willgrn. ♂; 4. *Bicelluphora argentea*, nov. spec. ♂;
 5. *Redoa melanocraspis*, Hmpsn. ♂.

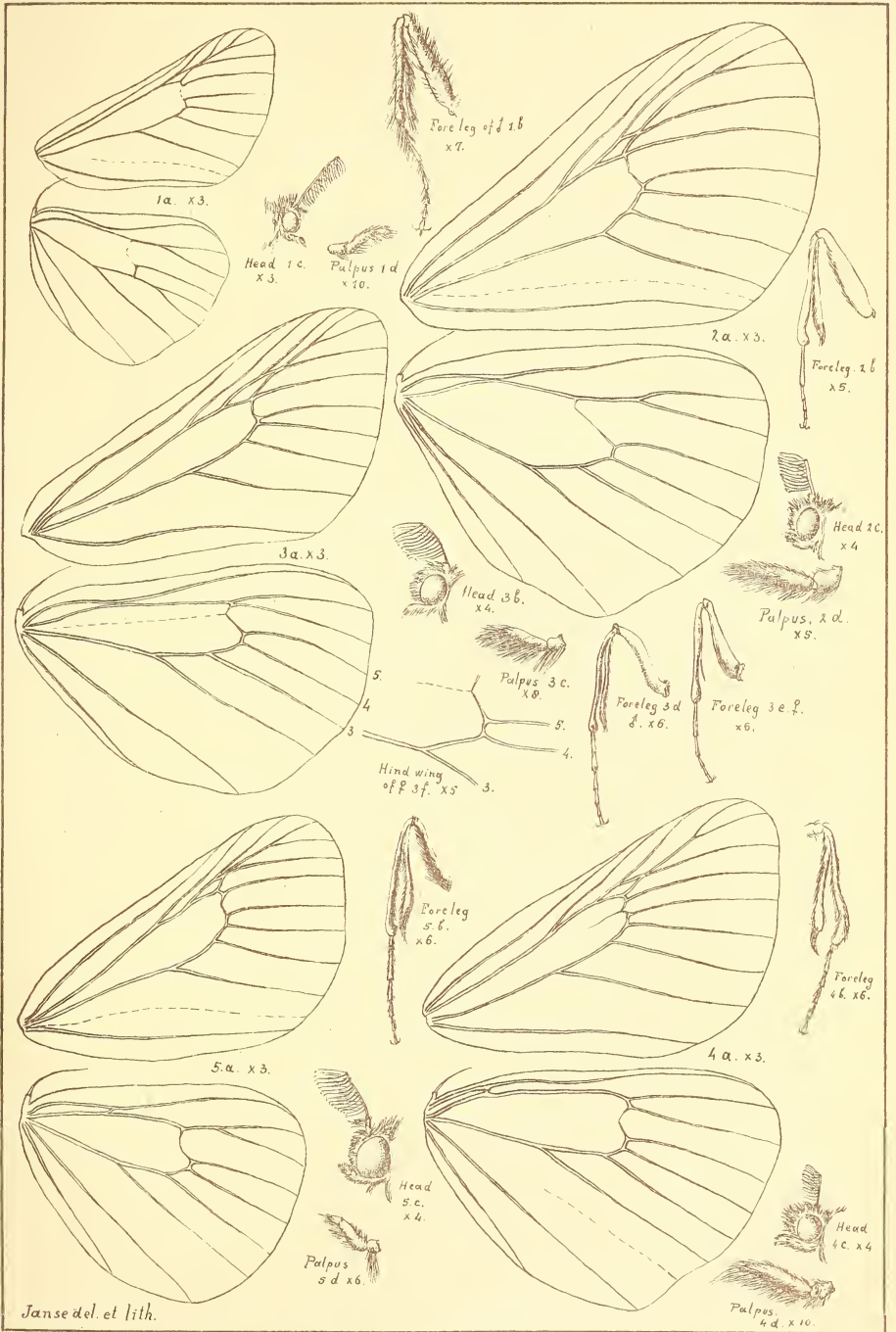
Annals of the Transvaal Museum Plate III



Janse del. ad. nat.

West, Newman chr.





1. *Lacipa picta*, Boisd. ♂; 2. *Creaga dealbata*, H.S. ♂; 3. *Cropera sericea* Hmōsn. ♂;
 4. *Cropera testacea*, Wik. ♂; 5. *Crorema adspersa*, H.S. ♂;

towards upper median and approaching to, but not anastomosing with, it at $\frac{1}{2}$, where upper median is bent.

Only one species is known to me of this peculiar genus. Its position is rather uncertain; it may be a side development of *Redoa*, parallel to *Lacipa*.

Bicelluphora argentea, nov. spec. (pl. III, fig. 2).

Head, thorax above, and fore wing silvery white, tinged with cream colour (XV); palpi, hairs on fore legs, abdomen underneath hair brown (XLVI); branches of antennæ fuscous (XLVI); abdomen and legs with whitish hairs; hind tibiae and all tarsae with a black band on outer side; a black elongated mark on pro-thorax between the tegulae; 2 black marks on meta-thorax near end of tegulae; all lines on fore wing blackish; sub-basal well defined, angled at upper median and extended till *1b*; anti-medial double, extending from costa to inner margin; orbicular pear-shaped, clearly defined; medial strong and from costa to inner part of reniform, then inwards along lower median for nearly $\frac{1}{3}$ of its length, then broadly to inner margin; postmedial thin, but sharply defined, from costa to inner margin, bordering the outer side of reniform, bent inwards at vein 2, outwards at median fold and inwards again at *1b*; a black streak from postmedial near costa to medial at upper angle and one from the same lines nearly parallel to medial at lower median from vein 3 to vein 2; sub-terminal line double, but inner line best defined, roundly curved outwards at veins 6 and 7, sharp at 4 to 5, then curved inwards and forming a macula at between 2 and *1b*; terminal faintly indicated between the veins; cilia silvery white with fuscous black (XLVI) at between veins 7-6, 6-5, 5-4, and above *1b*.

Hind wing silvery white, without any markings. Under side silvery white, with the fore wing thickly, and the hind wing thinly, irrorated with hair, brown.

Exp. 39, mill.

Hab. Barberton (Jeffery).

This species very much resembles a *Cerura* of the *Notodontidae* family, but its structure is clearly like a *Lymantriadae*. Only one specimen is known to me, belonging to the Transvaal Museum, which is unfortunately somewhat rubbed on one upper wing, but otherwise in good preservation. Type in coll., Tvl. Mus.

Genus LACIPA (pl. IV, fig. 1).

Lacipa, Wlk., Cat. IV, p. 790 (1855); type *picta*.

Microgymna, Willgrn., K. Vet. Akad. Handl. (2), V, p. 38 (1865); type *picta*.

Hmpsn., Ann. S.A. Mus., p. 403 (1905).

Proboscis absent; palpi short, porrect, somewhat drooping; first joint about 2 times longer than thick, with little hair underneath; second joint 2 times first joint, nearly straight, porrect, and with rather long hair underneath; third joint drooping, a little smaller than first joint, bluntly pointed, and with rather long hair underneath and at tip; eye nearly

round, large, over width of frons; frons evenly rounded; antennæ bipectinate, short, a little less than $\frac{1}{2}$ of costa of fore wing; first joint of shaft with a long tuft of hair; shaft curved; pecten in ♂ 8 times shaft, getting suddenly shorter towards apex and ending in 2 long bristles; in ♀ the antennæ are only $\frac{1}{4}$ of costa and the pecten are about 2 times shaft, but also ending in 2 long bristles; frons and tegulae covered with moderate hair; thorax with scales; abdomen about length of hind wing and covered with scales and hairs; fore tibia with a process nearly as long as the tibia, thin, slightly curved and bluntly pointed, covered on the outer side with long hair; hind tibia with 4 spurs; femora, tibiae, and tarsae of all legs with long hair.

Fore wing sub-triangular; costa slightly hollowed out; termen evenly rounded from veins 2 to 6; inner margin nearly straight; apex and tornus rounded; 1*b* simple at base; a trace of 1*c*; 2 from well beyond $\frac{1}{2}$ lower median; 3 from $\frac{1}{3}$ 2 to 4; 4 from lower angle; 5 from $\frac{1}{2}$ distance 3 to 4; discocellular only faintly represented; 6 from below upper angle; 7 and 8 on a stalk of $\frac{1}{6}$ whole length of 7, from upper angle; 9 and 10 on a stalk of over $\frac{1}{3}$ 9, originating from about $\frac{2}{3}$ of upper median; upper $\frac{1}{2}$ of stalk 9 and 10 and 9 as far as $\frac{2}{3}$ anastomosing with 8 from end of stalk 7 and 8 for about $\frac{1}{2}$ free part of 8, so as to form a small areole; 11 stalked with stalk of 9-10, so as to come out of $\frac{1}{2}$ of areole; 12 almost parallel to upper median and vein 11.

Hind wing nearly semicircular; costa almost straight; outer margin well rounded and with a slight lobe at veins 2 to 5; inner margin, apex, and tornus well rounded; 1*a* rather long; 1*b* somewhat curved; 2 from about $\frac{2}{3}$ lower median; 3 and 4 on a stalk of $\frac{1}{4}$ 3 and from lower angle; 5 from near middle of discocellular, the upper part of discocellular faint and oblique; cell a little over $\frac{1}{2}$ of wing; 6 and 7 from upper angle and on a stalk of $\frac{1}{3}$ of 6; 8 approaching upper median at beyond $\frac{1}{2}$, but not touching it, then curved upwards and again downwards towards tip.

The venation varies a little in the different species. In *pulverea* 11 comes from beyond $\frac{1}{2}$ the areole; in *quadripunctata* 11 comes from nearly the end of the areole and the stalk of 6 and 7 in the hind wing is longer, up to $\frac{1}{3}$ of 6; in *gemmata* 11 comes from the upper median, the areole is very small, 10 comes from $\frac{2}{3}$ stalk of 8 and 9, 7 comes from $\frac{1}{3}$ of stalk 8-9-10, while the hind wing has the stalk of 3 and 4 much longer ($\frac{1}{2}$), 5 comes from $\frac{1}{3}$ discocellular, which is more oblique, stalk of 6 and 7 is longer ($\frac{1}{2}$), 8 touches the upper median, though it does not anastomose with it; moreover, the process of the fore tibia is as long as the tibia.

It may be necessary to create a new genus for *gemmata*, but as it certainly comes very close to *Lacipa*, I leave it provisionally where it is.

Species marked with an * are only known to me from description.

1. *a.* Fore wing with the ground colour light orange-yellow (III)..... *sarcistis*.
- b.* Fore wing with the ground colour more whitish or pure white..... 2.
2. *a.* Fore wing and hind wing pure white; terminal spots yellow..... 3.

- b. Fore wing with ground colour whitish; hind wing yellowish or suffused with fuscous; terminal spots black..... 4.
3. a. Postmedial line with a few black spots at medial part only..... *gemmata*.
 b. Postmedial line with a complete series of black spots on inner side..... **nobilis*.
4. a. Fore wing with medial and postmedial lines defined by black..... *picta*.
 b. Fore wing with the medial and postmedial lines not defined by black..... 5.
5. a. Postmedial line angled at from vein 5 to 8..... 6.
 b. Postmedial line straight, oblique, and directed to near apex..... *quadripunctata*.
6. a. Fore wing with the ground colour whitish..... *pulverea*.
 b. Fore wing with the ground colour pale greyish-vinaceous (XXIX)..... *pulverea*, var.
 c. Fore wing with the ground colour pure white; bands broader than in *pulverea* and more orange..... 7.
7. a. Hind wing normal [light orange-yellow (III)]..... *picta*, var. a.
 b. Hind wing thickly suffused with fuscous..... *picta*, var. b.

Lacipa sarcistis, Hmps., Ann. S.A. Mus., p. 403 (1905).

Hab. Durban (E. E. Platt, XII).
 Pinetown (I, G. F. Leigh).
 Stanger (XII).

Lacipa pulverea, Dist., A. M. N. H. (7), I, p. 117 (1898).

Euproctis pubescens, Swinh, Trans. E. S., Lond., p. 404 (1903).

Hab. Pretoria (I, II, IX, XII, Janse).
 Van der Merwe Station (XII, Janse).
 Rietfontein No. 57 (I, Janse).
 Donkerhoek (X, Janse).
 Rustenburg (I).
 Moorddrift (X, Swierstra).
 Noerdkaap (I, Jeffery).

Lacipa pulverea, var.—Ground colour of fore wing pale greyish vinaceous (XXXIX) instead of whitish; hind wing light orange-yellow (III) and usually less, if at all, suffused with fuscous, as is generally the case in the typical *pulverea*.

Hab. Sarnia (X, Mr. Williamson).
 Durban (XII, A. Ross).
 New Hanover (X, C. B. Hardenberg).
 Gilletts (V).

Lacipa picta, Boisd., Delegorgue Voy. Afric. Austral., II, p. 599 (1847).

Herr Schöff., Ausser. eur. Schmett., fig. 113.

Hmps., Ann. S.A. Mus., p. 404 (1905).

Hab. Diep River (Cape Division) (II).
 Capetown (II).

Lacipa picta, var. a.—The orange bands with no black edging.

Hab. Port St. Johns (II, Swinny).

Lacipa picta, var. b.—Hind wing thickly suffused with fuscous.

Hab. Ngqeleni, Pondoland (I, Swinny).

Lacipa quadripunctata, Dew., Verh. L. C. Akad., XLIII, p. 67 (pl. III, fig. 4), (1881).

Lacipa sexpunctata, Dist., A. M. N. H. (6), XX, p. 201 (1897).

Lacipa quinquepunctata, Dist., A. M. N. H. (7), I, p. 117 (1898).

Hmpsn., Ann. S.A. Mus., p. 404 (1905).

Hab. Pretoria (I, II, X, IX, Janse).

Bandolierskop (X, Dr. L. Gough).

Potchefstroom (X, Miss Lion-Cachet).

White River (XI, XII, A. T. Cooke).

Haenertsburg (XII, Swierstra).

Warmberg (XII, Janse).

Pinetown (I, G. F. Leigh).

Lacipa gemmata, Dist., A. M. N. H. (6), XX, p. 200 (1897).

Hmpsn., Ann. S.A. Mus., p. 404 (1905).

Hab. Pretoria (II, III, XII, Dr. H. G. Breyer; K. Munio; Janse).

Bultfontein (I, Janse).

White River (I, A. T. Cooke).

Stanger.

Estcourt.

Barberton (XII, Janse).

Camperdown (IV, G. F. Leigh).

Ngqeleni (I, Swinny).

Spec. auctorum.

Lacipa nobilis, Herr Schäff., Aussereur. Schmett. (fig. 388) (1855).

Hmpsn., Ann. S.A. Mus., p. 404 (1905).

Genus CREAGA (pl. IV, fig. 2).

Creaga, Wllgrn., K. Vet. Akad. Handl. (2), V (4), p. 38 (1865); type *dealbata*.

Hmpsn., Ann. S.A. Mus., p. 393 (1905).

Proboscis absent; palpi hardly reaching frons, slightly ascending, two jointed; second joint nearly 3 times first joint and gradually tapering into a point, covered above and underneath with moderate hair; eyes large, fully width of frons; frons with a tuft of long hair; antennæ well curved, bipectinate; branches on inner side nearly forming a straight line; the longest branch 6 times the width of the shaft, and all ending in 2 long bristles; basal joint long, thick, and with a long hairy tuft in front; fore tibia in both sexes with a process on inner side almost as long as the tibia; mid tibia with 2 terminal spurs, of which the inner one is $\frac{2}{3}$ of the outer spur; hind tibia with 4 spurs of the same length; all tarsae,

covered with smooth short hair; abdomen in ♂ as long as hind wing, in ♀ a little shorter.

Fore wing triangular; termen much and evenly rounded; apex and tornus well rounded; *1b* simple at base; *1c* faintly represented; 2 from $\frac{3}{4}$ lower median; 3 from a little nearer to 4 than to 2; 4 from lower angle of cell; 5 from well above the angle; discocellular faint and somewhat curved inwards; cell over $\frac{1}{2}$ of wing; 6 from upper angle; 7 and 8 stalked for $\frac{1}{7}$ of 7 and from upper angle; 9 and 10 on a stalk of nearly $\frac{1}{4}$ of 10 and from $\frac{5}{6}$ of upper median; 9 anastomosing with 8, just as it comes from the stalk, for over $\frac{1}{2}$ free length of 8, so as to form the areole, which is over 2 times longer than broad; 11 from $\frac{2}{3}$ upper median and nearly parallel to 12; 12 parallel to costa for a great length.

Hind wing semicircular; costa and inner margin arched; termen much rounded; at *1b* a rounded lobe; apex well rounded; 2 from well beyond $\frac{1}{2}$ lower median; 3 from middle of 2 and 4; 4 from lower angle; 5 from well above the angle; discocellular very oblique, slightly angled at beyond $\frac{3}{4}$; cell a little over $\frac{1}{2}$ of wing; 6 and 7 on a stalk of $\frac{1}{4}$ and from upper median; 8 approximated to upper median at before $\frac{1}{2}$, then just touching it and a little curved at tip.

Creaga dealbata Herr Schöff., Aussereur. Schmett. (fig. 111) (1854).

Lalia aliena, Wlgrn., Wien. Ent. Mon., IV, p. 162 (1860).

Hmpsn., Ann. S.A. Mus., p. 393 (1905).

- Hab. Chilovane (Rev. Junod).
 Johannesburg (A. Ross).
 Three Sisters (III, Janse).
 Barberton (I, XII, Janse; Gould).
 Sarnia (XI, Mrs. Curry).
 Durban (X, G. F. Leigh) (XII, III).
 Umkomaas (I, Janse).
 Ngqeleni (III, Swinny).
 East London.

Genus CROPERA (pl. IV, fig. 3).

Cropera, Wlk., Cat. IV, p. 825 (1855); type . . . *testacea*.

Aurivil., *l.c.* p. 67.

Proboscis absent; palpi reaching just beyond frons, porrect, two jointed; second joint 3 times longer than the first, cylindrical and somewhat pointed, covered with rather long hairs; antennæ curved bipectinate, with the branches about 8 times the shaft and suddenly getting shorter towards base and apex, each ending in 2 or 3 bristles; first joint of shaft with a tuft of hair; fore tibia of ♂ with a process on inner side, nearly as long as the tibia and bluntly rounded at tip; ♀ with the tibia simple; mid tibia with 2 long spurs; hind tibia with 4 long spurs; tarsae of all legs with short smooth hairs; abdomen of ♂ as long as hind wing, of ♀ just a little longer.

Fore wing sub-triangular; costa a little arched at $\frac{1}{3}$ and slightly hollowed at $\frac{2}{3}$; termen much and inner margin a little arched; apex and tornus well rounded; 1b simple at base; 2 from before $\frac{2}{3}$ lower median; 3 from beyond $\frac{1}{2}$ of 2 to 4; 4 from lower angle; 5 from $\frac{1}{3}$ discocellular, which is angled into the cell at $\frac{2}{3}$ and giving off a faint vein into the cell; cell a little over $\frac{1}{2}$; 6 from well below the upper angle; 7 and 8 on a stalk of $\frac{1}{5}$ of 7 and from upper angle; 8, 9, and 10 stalked for nearly $\frac{1}{3}$ of 10, originating from beyond $\frac{3}{4}$ upper median; 9 anastomosing with 8 as soon as 8 comes from the stalk for nearly $\frac{1}{2}$ of 9, so as to form an areole about 3 times longer than broad; 10 comes from $\frac{2}{3}$ of areole; 11 from before $\frac{2}{3}$ of upper median; 12 oblique.

Hind wing broad, sub-triangular; costa, termen, and inner margin rounded; apex and tornus well rounded; tornus forming a rounded lobe at 1b; 1a and 1b straight; 1c faintly represented; 2 from before $\frac{2}{3}$ lower median; 3 from $\frac{2}{3}$ 2 to 4; 4 from lower angle; 5 from $\frac{1}{4}$ discocellular, which is angled at middle; 6 from a little below upper angle; 7 from the angle; 8 connected with the upper median by a very short bar at $\frac{1}{3}$.

In *Cropera sericea* the palpi are more drooping; 5 is nearer to 4; there is no trace of a veinlet in the cell; 6 is from upper angle; 11 is from $\frac{2}{3}$. The hind wing has no trace of 1c; discocellular is oblique and angled at $\frac{2}{3}$, where it emits a trace of a vein into the cell; 6 and 7 are from a point; 8 approaches upper median at $\frac{1}{2}$, but does not anastomose with it and is not connected with it by a bar. In the fore leg of the ♀ there is also a very short, thin process.

Aurivill. states (*l.c.* p. 67) that *perculta* belongs to this genus, but, as stated under *Bazisa*, this species is much more primitive and requires a genus of its own.

Only two species are known to me that fall under this genus.

- I. a. Ground colour of wings buff-yellow (IV); fore wing with a dark spot at discocellular..... *testacea*.
- b. Ground colour of wings cream colour (XVI); no dark spot on fore wing..... *sericea*.

Cropera testacea, Wlk., Cat. IV, p. 826 (1855) (pl. IV, fig. 4).

Laelia testacea, Hmps., Ann. S.A. Mus., p. 394 (1905).

This and the following species was placed under the genus *Laelia*, but it can be seen that this is certainly wrong, as *Laelia* has the palpi three jointed, the process of the fore leg is much longer and curved at the end outwards; 3 and 4 of hind wing are closer to each other than 2 and 3 in *Laelia*, while 6 and 7 are in that genus on a rather long stalk.

Hab. Krabbefontein (Dr. H. G. Breyer).

Shilovane (XI, Rev. Junod).

New Hanover (X, C. B. Hardenberg).

Sarnia (I, Janse; II, X, Mr. Williamson).

Durban (II, Clark; E. E. Platt) (VII, G. F. Leigh).

Umkomaas (I, Janse).

Ngqeleni (I, II, Swinny).

Cropera sericea, Hmpsn., A. M. N. H. (8), V, p. 441 (1910).

Hab. Pretoria (II, III, IX, Kapt. Paget; Miss Gunning; Mr. Swierstra; Janse).

Potchefstroom (III, Miss Lion-Cachet).

Warmberg (not Warmbath as Hmpsn. states) (XII, Janse).

Waterval Onder (II, Mr. Bonnekamp).

White River (XII, A. T. Cooke).

Barberton (IV, XII, Miss De Beer; Janse).

Durban (XII, A. T. Cooke).

Genus **CROREMA** (pl. IV, fig. 5).

Crorema, Wlk., Cat. IV, p. 811 (1855); type *mentiens*.

Aurivill., *l.c.* p. 67.

Description made from (?) *adpersa*, H-S.

Proboscis absent; palpi till just beyond frons, ascending; first joint almost circular, and with long hair underneath; second joint about 3 times first joint in length, and with long hair in front and above; third joint indistinctly marked off, as long as first joint, bluntly pointed, and with long hair in front and above; eye nearly round, large, of width of frons; antennæ bipectinate; shaft $\frac{1}{2}$ length of costa, somewhat curved; in ♂ the branches are about 8 times the shaft, getting shorter towards base and apex, so as to form a straight line, each ending in 2 bristles and most branches with a similar bristle pointing forwards at $\frac{1}{3}$ to $\frac{2}{3}$ of the branches;* in the ♀ the shaft is only $\frac{1}{3}$ of the costa, less curved, and the branches are only 2 times the shaft, but they have the terminal as well as the median bristles; vertex, frons, and thorax covered with long hair; abdomen in ♂ a little longer, in ♀ a little shorter, than the hind wing, and covered with moderate long hair; fore tibia with an abruptly pointed process, nearly as long as the tibia; in ♀ without a process; mid tibia with end spurs; hind tibia with 4 spurs; tarsae with short depressed hairs.

Fore wing of ♂ triangular; costa somewhat rounded; termen straight and rounded at 1b to vein 4; inner margin arched; apex and tornus well rounded; vein 1b simple at base; 1c faintly represented; 2 from $\frac{2}{3}$ lower median; 3 from before $\frac{2}{3}$ vein 2 to 4; 4 from the angle; 5 from well above the angle; discocellular faint and curved at middle; cell over $\frac{1}{2}$ of wing; 6 from well below upper angle; 7 and 8 on a stalk of $\frac{1}{3}$ 7, and from upper angle; 9 and 10 on a stalk of nearly $\frac{1}{2}$ of 10 and from upper median at beyond $\frac{3}{4}$; 9 anastomosing with 8 shortly after it gets free and just as 7 comes out of 8, for $\frac{1}{2}$ the length of 8, so as to form a rather long areole (in one ♂ specimen the left wing has 7 free from upper angle and 8, 9, 10 stalked, the other wing has 7 coming from the areole and not typically from end of areole; in one ♀ 7 comes from the stalk of 8, 9, 10, and 10 comes from the end of the areole; in six ♂♂ no areole is formed at all, but 7 and 8, 9 and 10 are stalked; 8 and 9 are more or less approximate to each other, but never anastomosing to form the areole; this is thus a most interesting example of atavism); 11 from

* Such bristles I have not found in any other genus of this family.

$\frac{1}{4}$ upper median; 12 curved at end and running parallel for nearly $\frac{2}{3}$ of its length with the costa.

Hind wing semicircular; costa nearly straight; termen and inner margin well rounded; apex and tornus much rounded; 1a straight, rather long; 1b slightly bent; 2 from beyond $\frac{1}{2}$ of lower median; 3 from $\frac{2}{3}$ distance 2 to 4; 4 from and 5 from close to lower angle; discocellular somewhat oblique; cell over $\frac{1}{2}$ of wing; 6 and 7 on a stalk of nearly $\frac{1}{3}$ of 7 and from upper angle; 8 connected with upper median by a distinct bar at $\frac{1}{2}$. (The venation of hind wing is fairly constant, though the distance of vein 3-4 and 4-5 varies a little, but these distances are never equal, or less between 3-4 than the distance between 4 and 5.)

I am sure that *adspersa* is wrongly placed in the genus *Laelia*, from which genus it differs in the palpi, the process of the fore tibia, the position of vein 6 in fore wing and of vein 3 in hind wing, and the connection of vein 8 to the upper median.

Aurivill. also places *fulvinitata* in this genus, but I have not been able to examine this species, though I have no doubt that this able observer is correct. Aurivill. also states that this genus is the same as *Olapa*, l.c. p. 67, but he rectifies this in his "Lep. Mad. and Comoro Islands," p. 337, thus leaving *Olapa* distinct.

Crorema adspersa, Herr Schäff., Aussereur. Schmett., fig. 109 (1854).

Laelia prolixa, Wllgrn., Wien. Ent. Mon., IV, p. 162 (1860).

Hmpsn., Ann. S.A. Mus., p. 395 (1905).

I have little doubt that the specimens I used for the description of this genus are correctly identified specifically, though I have not been able to get a reliable description and the fig. of Herr Schäff. is unknown to me. There is only a possibility that the species used is Holland's *setinoides*, which is entirely unknown to me. Sir Hampson gives as distinction between the two species, that *adspersa* is ochreous-yellow and *setinoides* is pale lemon-yellow; as no standard is mentioned, however, this distinction is far from certain.

The colour of my specimens varies a little, according to the amount of scaling, from baryta-yellow (IV) to pinard-yellow (IV), but even the darkest I could not call ochreous-yellow.

The differences in size are also no indication, as the specimens I have seen range in the ♂ from 26 to 40 mill. and in the ♀ from 42 to 51 mill.

All the specimens of the different *Musea* were also labelled as *adspersa*.

Hab. Pretoria (III, Miss Gunning; III, J. v. Niekerk).

Plat River (Jutrzencka).

Waterberg District (Jutrzencka).

Woodbush Village (XII, C. J. Swierstra).

Krabbefontein (Dr. H. C. Breyer).

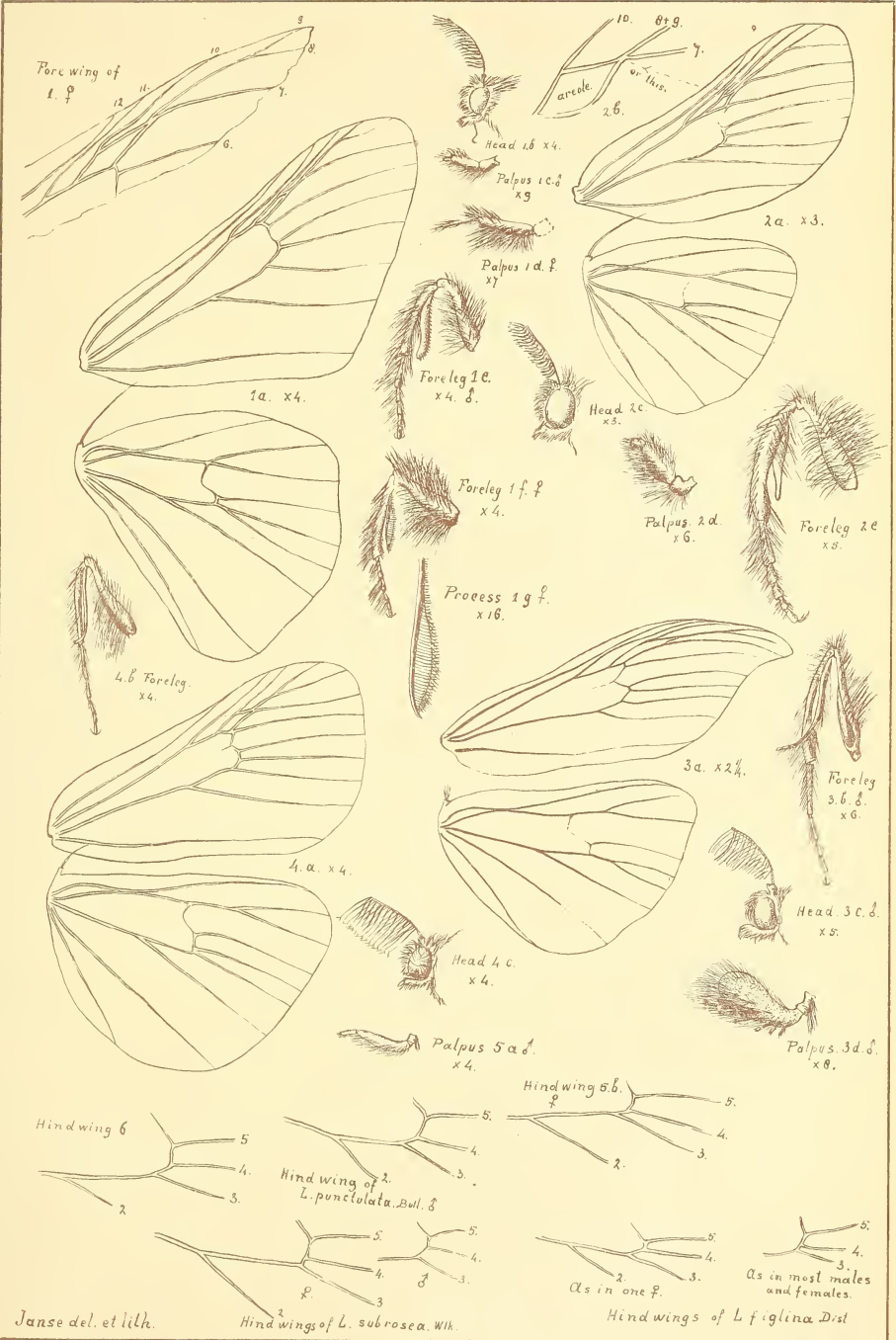
Kourulene (XI, Mr. Robson).

Shilouvane (XI, Rev. Junod).

Rietfontein No. 57 (I, Janse).

Waterval Onder (II, XI, Mr. Bonnekamp; Janse).

Nelspruit (I, A. T. Cooke).



Janse del. et lith.

1. *Dasycampa*, nov gen ♂; 2. *Dasychira pudibunda*, Lin ♂; 3. *Psalis securis*, Hubn ♀.
 4. *Laelia bifascia*, Hmps. ♂; 5. *L. diascia*, Hmps. ♂, ♀; 6. *L. xyleutis*, Hmps. ♂.

Three Sisters (II, Janse).
 Barberton (XII, Janse ; III, IV, Miss De Beer).
 New Hanover (X, XI, C. B. Hardenberg).
 Sarnia (XI, Mrs. Curry ; I, Janse).
 Pinetown (I, XI, G. F. Leigh).
 Umkomaas (I, Janse).
 Duff's Road (Natal).
 Tongaat (Natal)

Species *auctorum* : *fulvinotata*, Butl., P. Z. S., p. 678 (1893).
 Hmpsn., Ann. S.A. Mus., p. 394 (1905).
 Aurivill., *l.c.* p. 67.

Genus *DASYCAMPA*, nov. (pl. V, fig. 1).

Type *ianthina*, nov. spec.

Proboscis very short ; palpi in the ♂ short, just reaching frons, somewhat drooping ; second joint nearly as long as first joint, hairy underneath, at tip, and also above ; in the ♀ the palpi are long, second joint 2 times longer than in ♂, third joint very long ($\frac{2}{3}$ of second joint), thin, and pointed, second joint with long hair underneath and with tri-lobate scales at the sides, third joint not hidden ; eye elliptic, moderate, less than frons ; frons with a tuft of hair ; antennæ very short, only $\frac{1}{3}$ of costa, bipectinate ; branches about 8 times the shaft, without bristles at the end, but much ciliated ; in ♀ the branches are about 6 times the shaft and are getting suddenly shorter towards apex ; thorax covered with long straight hairs and with 2 dorsal scale tufts near abdomen ; abdomen short in ♂, about $\frac{2}{3}$ of hind wing ; in ♀ longer, a little over hind wing, in both sexes moderately hairy above and with longer hair ventrally ; a dorsal tuft of hairs and scales ; hairs of anal segment long in ♂, moderate in ♀ ; legs over their whole length, including the tarsæ on the outer side, with very long hair ; fore legs in the ♂ with a broad roundly pointed process, as long as tibia and with short hair on the outer side ; process in ♀ broader, but thinner and slightly shorter, apparently broadened to a thin lamella at least $\frac{2}{3}$ of its length and covered with a large number of stiff bristles, overlapping the lamella, giving it the appearance of being a striated lamella, between the bristles some thinner hairs ; mid and hind tibiae each with 2 spurs only.

Fore wing of ♂ triangular ; costa slightly hollowed out ; termen oblique and with the inner margin straight ; apex rounded ; tornus slightly rounded ; 1b simple at base ; 2 from before $\frac{2}{3}$ lower median ; 3 from $\frac{2}{3}$ 2 to 4 ; 4 from lower angle ; 5 from just above the angle ; discocellular thin and hollowed out ; cell over $\frac{1}{2}$ of wing ; 6 from well below the upper angle ; stalk of 7 and 8 from upper angle ; 7 from 8 before $\frac{1}{2}$ of 8 ; stalk of 9 and 10 from upper median close to the angle ; 9 from 10 at $\frac{1}{3}$ of 10 ; 9 anastomoses at $\frac{1}{2}$ stalk of 7 and 8 for about $\frac{1}{2}$ of free part of 8, so as to form a long and narrow areole ; 11 from beyond $\frac{3}{4}$ upper median, and parallel to 12 ; 12 parallel to costa for a great length.

In ♀ the areole is broader, as the stalk of 9 and 10 comes from upper median about 2 times further from the angle than in the ♂ ; the areole

is also shorter as stalk of 7 and 8 is shorter and 9 anastomoses with the stalk just there where 7 comes out of it.

Hind wing of ♂ broad, triangular; costa much arched; termen roundly lobed at vein 2 to 5; inner margin straight; apex and tornus rounded; *1a* long, curved; *1b* curved; 2 from $\frac{2}{3}$ lower median; 3 and 4 very shortly stalked or from lower angle; 5 from just above the angle; 6 and 7 from upper angle; discocellular slightly oblique; cell $\frac{1}{2}$ of wing; 8 much curved towards upper median at $\frac{1}{3}$, then touching it, and after that parallel to 7.

Fore wing of ♀ has the costa arched; vein 11 is given off at before $\frac{1}{2}$ the areole, and not as in ♂ beyond $\frac{1}{2}$ of areole; hind wing more semi-circular; vein 3 and 4 on a longer stalk; 6 and 7 on a short stalk.

This genus comes, I think, quite close to *Orgyia*, from which it differs in having vein 5 much farther away from 4, and vein 6 from the upper angle in the fore wing; the hind wing has 3, 4, and 5 far apart and nearly from equal distances, and 6 and 7 are on a long stalk; the process of the fore leg of the ♂ is also quite different, more as in *Euproctis*; the third joint of the palpi is absent and the ♀ is wingless.

This genus also resembles *Dasychira* very much, the neuration being very similar, except for the longer stalk of vein 7 of fore wing and the slightly longer stalk of 6 and 7 in hind wing and the difference in wing shape of both sexes; palpi and process of fore tibia are also different, and the hind legs have also 4 spurs and not 2 as in *Dasyampa*. It may be, however, that these two genera had the same ancestor.

***Dasyampa ianthina*, nov. spec. (pl. III, figs. 3, 4).**

♂. Hairs on head, thorax on under side, and hairs on fore tibia whitish, mixed with fuscous-black (XLVI) and deep chrome (III) hairs; palpi, tarsae of fore legs and the whole mid and hind legs deep chrome; thorax above and tegulae with whitish hairs mixed with fuscous-black and orange (III) scales; scale tuft of thorax orange; abdomen black, broadly ringed with deep chrome; hairs of anal tuft and abdomen on ventral side deep chrome; a basal dorsal tuft of black scales; antennæ brussels brown (III).

Fore wing with the ground colour cinnamon-brown (XV); from inner margin to median fold pale purplish-vinaceous (XXXIX), becoming nearly white beyond postmedian line; scattered pale purplish-vinaceous scales at basal and terminal area; near base a fuscous black triangular patch with the point towards inner margin and with some pale purplish-vinaceous scales in it; antimedial line of russet (XV) and fuscous scales, angled at lower median; a triangular fuscous-black patch beyond it, with its base touching inner margin and with a few capucine yellow (III) scales in it; reniform only represented by some fuscous-black scales, which extend towards costa and fill the angle of vein 3 and 4; postmedial line bordered with a light shade on outer side, near costa with a cream-coloured (XVI) patch; from median fold to inner margin with a whitish streak, angled at vein 5 to 4, then roundly curved inwards and waved at the veins; sub-terminal line indicated by some pale purplish-vinaceous scales, beginning at costa with a small dark patch; cilia of ground colour, mixed with whitish.

Hind wing fuscous-black, with some light orange-yellow (III) hairs at basal and inner marginal part; cilia light orange-yellow.

Under side: fore wing fuscous-black, except a white postmedial elliptical patch from vein 5 to inner margin; veins in patch and lower part of patch from above vein 1b to inner margin pale orange-yellow; costa edged with pale orange-yellow, broadly at basal and postmedial part; hind wing as on upper side, but with no light orange-yellow hairs from median fold, but with some light orange-yellow scales at tornus.

♀. Abdomen more pale orange-yellow; dorsal tufts very large and consisting of black scales; fore wing cream colour (XVI); basal patch between median fold and inner margin larger and somewhat extended along inner margin to postmedian line; antimedial line ochraceous-orange (XV), mixed with fuscous scales, angled at cell and rounded between vein 2 and 1b; reniform more distinct, consisting of fuscous-black scales; medial line ochraceous-orange, diffused and extended over reniform, angled at 5; postmedial double, less angled than in ♂, made of russet scales and waved at veins, outer line less distinct from discal to medial fold, but extended at costal area till near sub-terminal line to an irroration of fuscous-black and becoming more amber brown (III) between vein 4 and 6 and with a blackish irroration near inner margin; sub-terminal as in ♂, but less distinct; cilia of ground colour and with fuscous scales at between veins 2 to 6. Hind wing light orange-yellow; an indication of a medial line by a dark irroration;* cilia of ground colour.

Under side: both wings light orange-yellow, except postmedial part of fore wing, which is pale orange-yellow (III); a fuscous irroration at medial part, from areole to inner margin along which it is extended towards base and tornus; a thin postmedial irroration from vein 2 to 5 or 6; hind wing with medial line represented by a broad fuscous-black irroration.

Exp. ♂, 27·3 mill.; ♀, 44·4 mill.

It is possible that the ♂ is abnormally small, as I bred at the same time an abnormally small ♀ of 31·1 mill., but the ♂ specimen seems quite normally developed, while the ♀ specimen is clearly crippled.

One ♂ type from Barberton (I, Janse) in coll., Janse.

One ♀ type from Woodbush Village (XII, Swierstra) in coll., Tvl. Mus.

2 ♀♀ co-types from Barberton (XI) in coll., Tvl. Mus. and Janse; another small ♀ from Barberton (I, Janse).

Genus *DASYCHIRA* (pl. V, fig. 2).

Dasychira, Steph., Ill. Brit. Ent. Haust., II, p. 58 (1829); type *pudibunda*.
Boreconia, Wlk., Cat. XXXII, p. 459 (1865); type *fusca*.

Hmps. n., "S.A. Moths," Ann. S.A. Mus., p. 396 (1905).

The following description is made from *D. pudibunda* :—

Proboscis very short, almost absent; palpi porrect, short, just reaching beyond frons; first joint pear-shaped; second joint thick, oval, 2 times first joint; third joint shorter than first joint, blunt, thin, and hidden by

* In one ♀ there is no dark irroration in fore wing and hind wing, except the basal patch near inner margin; the sub-terminal line is thin, brownish, distinct, and angled inwards at vein 5; under side with no markings.

the hairs of the second joint, with which it is covered very thickly in front; eyes large, rounded, of width of frons; antennæ bipectinate, about $\frac{1}{3}$ of costa in length and curved; in ♂ the branches are about 5 times thickness of shaft, getting shorter towards base and apex, ending each in a bristle; in ♀ the antennæ are $\frac{1}{4}$ of costa and the branches are about as long as thickness of shaft, ending in 2 bristles; vertex, frons, and thorax clothed with rather long hair in ♂, in ♀ the hair is more smooth; abdomen in ♂ a little longer than hind wing and covered with woolly hair, in ♀ the abdomen is much longer than hind wing and the hairs are shorter; some species of this genus have dorsal tufts. Fore tibia with a somewhat pointed, slightly curved process in ♂, about $\frac{3}{4}$ length of tibia, in ♀ no process; tarsae with long spreading hair on outer side; mid tibia with 2 spurs; hind tibia with 4 spurs, and all tibiae with long hair; tarsae of mid and hind legs with the hairs not spreading.

Fore wing of ♂ sub-triangular, in ♀ much more elongate; costa slightly hollowed out at $\frac{1}{2}$; termen and inner margin rounded; apex and tornus rounded; 1b simple at base; 2 from $\frac{3}{4}$ lower median; 3 from $\frac{2}{3}$ distance 2 to 4; 4 from lower angle; 5 from above the angle; discocellular oblique, faint; cell about $\frac{1}{2}$ of wing; 6 from upper angle; 7 and 8 stalked for $\frac{1}{3}$ of 7 and from the angle; 10 and 9 on a stalk of $\frac{1}{3}$ of 10 and from $\frac{5}{6}$ upper median; 9 anastomosing with stalk of 7 and 8 at $\frac{1}{2}$ and further with vein 8 for $\frac{1}{2}$ the free length of this vein, in order to form the areole; 10 approximated to stalk of 8 and 9 at $\frac{1}{3}$; 11 from $\frac{2}{3}$ upper median, first bent to approximate 12 and then bent to approach 10 just beyond origin; 12 parallel to costa for $\frac{3}{4}$, then suddenly bent to costa.

Hind wing semicircular; costa arched at $\frac{1}{3}$; termen, inner margin, apex, and tornus well rounded; 1a rather long; 1b straight towards tornus; 2 from $\frac{2}{3}$ lower median; 3 and 4 from lower angle; 5 from well above the angle; discocellular curved inwards and faint; cell a little over $\frac{1}{2}$ of wing; 6 and 7 on a very short stalk and from the upper angle; 8 just touching the upper median at before $\frac{1}{2}$, then towards apex, where it is well curved.

Range: Europe, Africa, Madagascar, Japan, China, British India, Ceylon, Burmah, Java, Australia.

It seems to be very difficult to separate this genus from the closely allied genus *Laelia*, and a number of mistakes have been made and insufficient characters given by various authors.

Prof. A. Spuler, in his "Schmetterlingen Eur. Bnd.," I, p. 128, states that *Dasychira* has only end spurs on the hind tibiae, but the type species, *D. pudibunda*, of which I examined two ♂♂ and two ♀♀, and all South African species brought by other authors in this genus, have distinctly 4 spurs in both sexes.

Sir Hampson, in "South African Moths" (Ann. S.A. Mus., p. 390, 1905), gives as a distinction that *Dasychira* has a more oblique termen, which in *Laelia* should be more erect, but there are many graduations between the two. In his "Fauna of British India," Vol. I, p. 440, he mentions the long third joint of the palpi in *Laelia*, this being short in *Dasychira*, but in his key, *l.c.* p. 433, the lateral tufts on the fore tarsae are taken as distinctive for *Dasychira*.

E. Meyrick, B.A., states in his "Handbook of British Lepidoptera," that the posterior tibiae have no middle spurs in *Dasychira*, and he also mentions the concealed third joint of the palpi, which I believe to be the most reliable character.

Prof. Aurivillius, in "Ark. för Zool. Bnd," II, No. 4, p. 68, takes the spreading hairs of the fore tarsae as distinctive for *Dasychira*.

Dr. A. J. Turner, in his "Australian *Lymantriadae*," p. 473, takes the dense hairs on the abdomen as characteristic for *Dasychira*, but, though this may hold good for the Australian species, it certainly does not hold for the South African species. The dense hairs of the fore tarsae he takes as being peculiar to *Psalis*.

Perhaps it is hardly possible to draw a distinct line between the species of the genera *Dasychira* and *Laelia*, but I think that the third joint of the palpi and the process of the fore tibia are most reliable when taken together; next to these come the spreading hairs of the fore tarsae of *Dasychira*, which are, as a rule, short and depressed in *Laelia*.

The shape of the fore wing is very misleading, especially the oblique termen, which is often as erect as in *Laelia* in an otherwise distinct *Dasychira*, e.g. *fusca*, ♂ of *municipalis*, ♂ of *extorta*.

The venation of the wing is very similar in both genera, only the stalk of 8 and 9 of fore wing is $\frac{1}{2}$ or over $\frac{1}{2}$ in *Dasychira* and usually less in *Laelia*. *L. subrosea* and *L. diascia* have that stalk, over $\frac{1}{2}$, however; 12 is as a rule approximate to 11 in *Dasychira*, but sometimes this vein is parallel, which is always the case in *Laelia*. In *Dasychira* the stalk of 6 and 7 of hind wing is not more than $\frac{1}{6}$, except in *D. octophora*, where the two veins come from a point, and in *D. georgiana*, where the stalk is rather long; in *Laelia* the stalk is about $\frac{1}{3}$, in *L. subrosea* even $\frac{1}{2}$; vein 8 is approximated to upper median before $\frac{1}{2}$ in *Dasychira*, except in *D. municipalis* and *D. extorta*, where it is at $\frac{1}{2}$; in *Laelia* 8 approximates the upper median just beyond $\frac{1}{2}$, except in *L. diascia*, where it is at $\frac{1}{3}$.

The process of the fore tibia of *Dasychira* is short, a little less than the tibia, thick and bluntly pointed, nearly straight or gently curved, but never projecting over the tibia towards the outer side (in *fusca*, *municipalis*, *lunensis*, and *vilis* it is long and thin, but not curved). In *Laelia* this process is a little longer than the tibia, thin and pointed, and at the end well curved outwards, sometimes even projecting well over the tibia.

The fore tarsae of *Dasychira* have, as a rule, long spreading hairs, especially the first joint, but in *D. vilis*, *D. lunensis*, and *D. octophora* the hairs may be very short and do not spread.

The palpi of *Dasychira* have the second joint elliptical, about 2 times longer than broad and in front covered with very dense long hair; the third joint is short (about $\frac{1}{3}$ of second joint), and as a rule hidden in the hairs of the second joint and a little oblique; in *D. fusca*, however, the third joint is a little longer and somewhat exposed; while *D. municipalis* has the palpi as in *Laelia*, and *D. whitei* almost so.

The palpi of *Laelia* have the second joint more elongate, about 3 times longer than broad or even more; the third joint is about half the length of the second joint, thin and porrect, and with a pointed tuft of hair.

In this key I had largely to follow Sir Hampson's key, *l.c.* p. 397, as

too many species are unknown to me; such species are here marked with an * :—

- | | |
|---|-----------------------|
| 1. a. Abdomen without dorsal crests..... | 2. |
| b. Abdomen with dorsal crests..... | 6. |
| 2. a. Fore wing with basal and medial areas tinged with greenish..... | 3. |
| b. Fore wing with these areas not tinged with greenish.. | 4. |
| 3. a. Fore wing with a sub-terminal series of dark lunules.. | <i>fusca.</i> |
| b. Fore wing without sub-terminal dark lunules..... | * <i>herbida.</i> |
| 4. a. Fore wing with postmedial line angled inwards at discal fold..... | 5. |
| b. Fore wing with postmedial line not angled at discal fold..... | <i>municipalis.</i> |
| 5. a. Hind wing white, the apical area tinged with fuscous (XLVI)..... | * <i>postpura.</i> |
| b. Hind wing fuscous, basal and medial areas olive-brown (XL)..... | <i>vilis.</i> |
| 6. a. Fore wing with the ground colour brownish..... | 7. |
| b. Fore wing with the ground colour grey..... | 14. |
| c. Fore wing with the ground colour white..... | 16. |
| 7. a. Fore wing with whitish spots on costa and in end of cell..... | * <i>proleprota.</i> |
| b. Fore wing without white spots..... | 8. |
| 8. a. Fore wing with whitish patches on inner and apical areas..... | <i>whitei.</i> |
| b. Fore wing without whitish patches on inner and apical areas..... | 9. |
| 9. a. Hind wing white or fuscous..... | 10. |
| b. Hind wing bright rufous..... | * <i>metathermes.</i> |
| c. Hind wing black in ♂, orange in ♀..... | * <i>libyra.</i> |
| d. Hind wing auburn in ♂, deep chrome in ♀..... | <i>greeni.</i> |
| 10. a. Fore wing with the postmedial line placed on an oblique rufous band..... | <i>curvivirgata.</i> |
| b. Fore wing with the postmedial line not placed on an oblique rufous band..... | 11. |
| 11. a. Fore wing with the lines rufous..... | * <i>rubrifilata.</i> |
| b. Fore wing with the lines dark..... | 12. |
| 12. a. Fore wing with the postmedian line outwardly oblique towards costa..... | * <i>escota.</i> |
| b. Fore wing with the postmedian line incurved to costa. | 13. |
| 13. a. Fore wing with the sub-terminal line dark..... | <i>extorta.</i> |
| b. Fore wing with the sub-terminal line pinkish-buff (XX), defined by dentate dark marks on inner side. | <i>lunensis.</i> |
| 14. a. Fore wing with median line present..... | * <i>atrilata.</i> |
| b. Fore wing with median line absent..... | 15. |
| 15. a. Fore wing with postmedian line not angled inwards in discal fold..... | * <i>extatura.</i> |
| b. Fore wing with postmedian line angled inwards in discal fold..... | * <i>gwelila.</i> |

16. *a.* Fore wing suffused with green (sometimes slightly)... 17.
b. Fore wing not suffused with green..... 18.
17. *a.* Hind wing pure white in ♂..... *rocana*.
b. Hind wing greyish-brown in ♂; in ♀ white with a sub-
 median patch..... **mascarena*.
18. *a.* Fore wing white, tinged and thickly irrorated with
 brown veins..... **poliotis*.
b. Fore wing pure white; veins not coloured brown.. 19.
19. *a.* Fore wing with the lines dark..... 21.
b. Fore wing with the lines yellowish, slight..... 20.
20. *a.* Legs pure white; abdomen without black segmental
 markings; apex of abdomen white..... *pyrosoma*.
b. Legs with indeterminate black markings; abdomen
 with posterior margins of three basal segments
 black; apex of abdomen ochraceous..... **confinis*.
21. *a.* Fore wing with ground colour greyish-white; veins
 yellowish..... **cangia*.
b. Fore wing with the ground colour pure white; veins
 of the same colour or irrorated with dark scales... 22.
22. *a.* Fore wing with the dark lines indistinct..... *georgiana*.
b. Fore wing with the lines distinct..... 23.
23. *a.* Fore wing with a black patch on inner margin con-
 joining antimedial and postmedial lines..... **bryophilina*.
b. Fore wing without such a black patch..... *octophora*.

Species in South Africa:—

Dasychira fusca, Wlk., Cat. IV, p. 918 (1855).

Orgyia tephra, Herr Schäff., Aussereur. Schmett., fig. 387 (1855).

Boreconia subviridis, Wlk., Cat. XXXII, p. 460 (1865).

Hmps., Ann. S.A. Mus., p. 397 (1905).

Hab. Kalk Bay (VI).

Capetown (IV, V, Lord Gladstone).

I have only seen ♂♂ of this species.

Dasychira municipalis, Dist., A. M. N. H. (6), XX, p. 200 (1897).

Lacipa diffusa, Dist., A. M. N. H. (6), XX, p. 200 (1897).

Hmps., Ann. S.A. Mus., p. 397 (1905).

Hab. Pretoria (XII, Janse).

Waterval, Zoutpansberg (XI, Janse).

Woodbush Village (VIII, XII, Swierstra).

Shilovane (XI, Rev. Junod).

Rooiplaat (III, Swierstra).

Van der Merwe Station (XII, Janse).

Waterval Onder (XI, XII, Janse).

Three Sisters (III, Janse; IV, Mrs. Snooke).

Barberton (I, II, Janse).

Sarnia (II, Williams).

Durban (Green; Clark).

Umkomaas (I, Janse).

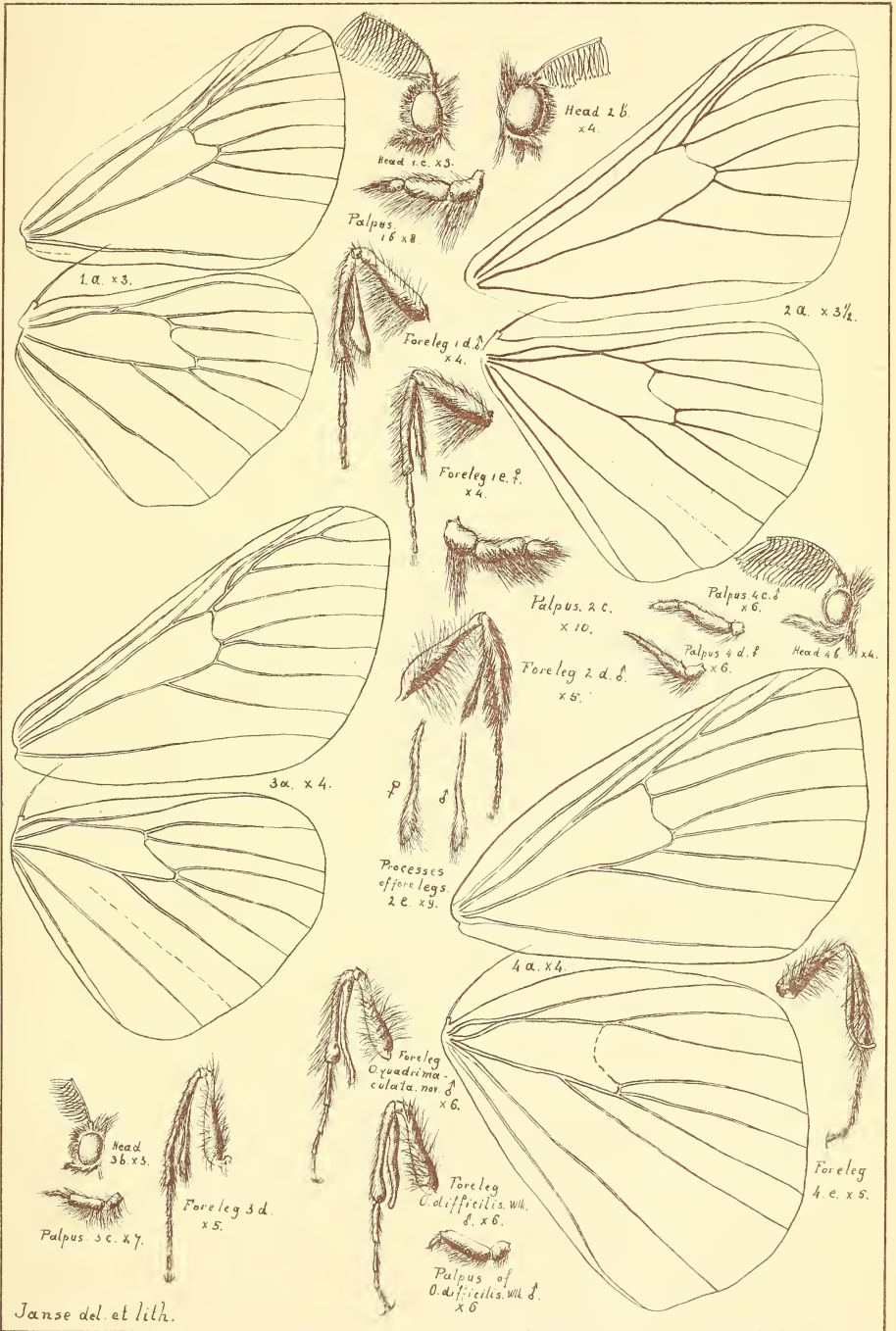
Ngqeleni (II, III, VIII, Swinny).

Port St. Johns (VIII, Swinny).

Stanger (Natal).

- Dasychira vilis**, Feld., Reis. Nov. (pl. 100, fig. 7) (1874).
- Dasychira postfusca**, Hmps., Ann. S.A. Mus., p. 397 (1905).
Hab. Durban (E. L. Clark).
- Dasychira curviringata**, Karsch., Ent. Nachr., 1895, p. 373 (pl. IV, fig. 3).
Hmps., Ann. S.A. Mus., p. 399 (1905).
Hab. Durban (VIII, Leigh).
Port St. Johns (I, Swinny).
- Dasychira extorta**, Dist., A. M. N. H. (6), XX, p. 203 (1897).
Lymantria hera, Druce, A. M. N. H. (7), I, p. 209 (1898).
Hmps., Ann. S.A. Mus., p. 400 (1905).
Hab. Pretoria (I, X, Janse).
Rietfontein No. 57 (I, Janse).
Johannesburg (III, IV, XII, Ross).
White River (III, Cooke).
Three Sisters (II, III, IV, Janse).
Durban (IV, Clark; V, X, Leigh) (III, XI, XII).
Umkomaas (I, Janse).
- Dasychira lunensis**, Hmps., Ann. S.A. Mus., p. 400 (1905).
Hab. Durban (II, Cooke; IV, VIII, X, XI, Leigh).
Ngqeleni (III, Swinny).
- Dasychira whitei**, Druce, A. M. N. H. (7), I, p. 209 (1898).
Hmps., Ann. S.A. Mus., p. 401 (1905).
Hab. Durban (III, Clark; E. E. Platt).
- Dasychira georgiana**, Fawcett, Tr. Zool. Soc., XV, p. 314 (pl. xlix, figs. 19, 20, 21) (1900).
Hmps., Ann. S.A. Mus., p. 402 (1905).
Hab. Durban (I, II, VI, VII, VIII, IX, XI, XII, Leigh).
- Dasychira octophora**, Hmps., Ann. S.A. Mus., p. 402 (1905).
Hab. Durban (Clark; Green).
- Dasychira rocana**, Swinh., A. M. N. H., 7 (XVII), p. 545 (1906).
Hab. Durban (III, Clark).
Lydenburg (in Tvl. Mus.).

The two ♂♂ I have examined differed somewhat in colouring, though I have no doubt that they were identical. This species was described by Col. Swinhoe from one Coomasie specimen only, which, as Mr. A. T. Cooke informs me, is larger than the Durban specimen, which he carefully compared with the type. This Durban specimen, which is in Mr. E. L. Clark's collection, has the anti-medial area, the costal medial part, and half the terminal area



1. *Lymantria modesta*, Wlk. ♂; 2. *Polymona ruffemur*, Wlk. ♂;
 3. *Aclonophlebia rhodalipa*, Feld ♂; 4. *Ornithopsyche discalis*, Wlk. ♂.

white, suffused with lettuce green (V); the pategia and posterior part of thorax also lettuce green, mixed with black scales; in the Lydenburg specimen, also a ♂ and in the Tvl. Mus. coll., the whole fore wing is hair brown (XLVI), though a little lighter at sub-basal and costal areas; the lines are the same in the two specimens, except the antimedial, which is straight in the Durban specimen and somewhat curved near costa and dentate inwardly at lower median and *1b* in the Lydenburg specimen.

Dasychira pyrosoma, Hmps., A. M. N. H. (8), Vol. V, p. 450 (1910).

Hab. Durban (II, III, Leigh); ♂ and ♀.

Barberton (I, G. W. Jeffery).

The ♀♀ I have examined have the lines on the fore wing much more pronounced than the ♂♂, and the hairs on head, thorax, and fore legs are more tinged with yellow. The ♀ in my collection has the markings as follows:—Sub-basal line buff-yellow (IV) and extended till *1b*; antimedial line double, of which the inner one is maize-yellow (IV) and the outer line buff-yellow, more pronounced, evenly curved outwards, and ending at *1b*; medial line broad, diffused, beginning just below costa, evenly curved inwards at cell, between lower median and *1b*, maize-yellow; reniform well defined by buff-yellow, filled with and on outer side with diffusion of maize-yellow; postmedial double, oblique, nearly straight till 3 and slightly curved inwards at 2 and *1b*, somewhat dentated outwards at the other veins; inner line well defined, buff-yellow; outer line more diffused, broader, and maize-yellow; sub-terminal somewhat diffused, broad, maize-yellow, and parallel to postmedial; a faint terminal diffused line of pale maize-yellow; cilia silvery white.

Dasychira greeni, nov. spec. (pl. III, figs. 5, 6).

♂. Fore wing very long, triangular; hind wing rather small, somewhat circular; hairs on vertex, thorax, palpi above, shaft of antennæ, and legs hair-brown (XLVI), mixed with fuscous (XLVI); palpi and thorax underneath, fore legs on inner side, and frons with warm buff (XV) hairs, mixed with ochraceous-tawny (XV) hairs; tibiae and tarsae of all legs ringed with fuscous; branches of antennæ fuscous-black (XLVI); abdomen somewhat greasy, but hairs probably ochraceous-orange (XV), three tufts of black scales and hairs on first three abdominal segments; some black scales on end of metathorax; anal tuft of long hairs. Fore wing with ground colour light buff (XV), but thickly covered with fuscous scales, except at before and beyond antimedial line, a medial triangular patch near costa, costal part of postmedial line and the sub-terminal line between the veins; sub-basal line indistinct; antimedial fuscous-black, much dentated at upper median, below lower median and *1b*; median line indistinct, double, waved, fuscous-black; reniform almost square, of ground colour, and slightly irrorated with sayal brown (XXIX) scales; at costa a patch of ground colour, divided into two by medial line; post-medial indistinct, dentated at the veins and near costa, on outer side with a patch of ground colour; sub-terminal consisting of an indistinct series

of lunes between the veins and of ground colour, suffused on inner side with fuscous-black; terminal line consists of some small fuscous-black lunules only; cilia fuscous-black with light buff scales at end of veins.

Hind wing very greasy, but probably auburn (II) in colour, without any markings; cilia as in fore wing.

Under side of fore wing with the ground colour at discal area ochraceous-orange (XV) and of a Prout's brown colour (XV) at costal area from below lower median to inner margin, from discoceellular to termen, and from before $\frac{1}{2}$ vein 2-4 till termen. Hind wing ochraceous-orange.

Exp. 36 mill.

♀. Head, thorax, and legs as in ♂; palpi with the third joint long and thin, as in *Lalia*; second and third joints pale ochraceous-buff (XV) with fuscous-black hairs; abdomen in type badly rubbed, in co-types deep chrome above and pale yellow-orange (II) underneath; last two segments with pale yellow-orange hairs above; three large blackish scale tufts on abdomen.

Fore wing with ground colour light buff [in some specimens well irrorated over whole wing with light cinnamon-drab (XLVI), in one specimen with light purple-drab (XLV)]; basal and sub-basal lines somewhat diffused, fuscous; antimedial line diffused, fuscous, waved at upper and lower median, median fold and 1b; medial line more defined from upper median to inner margin and waved in cell, median fold and at 1b; orbicular ill-defined by fuscous scales; above it till costa a dark suffusion; postmedial fuscous, well defined, and dentated at all veins and median fold; space between postmedial and sub-terminal lines filled with a more or less dense irroration, consisting of scales from hair-brown to brownish-drab (XLV); sub-terminal only indicated by fuscous lunules between the veins; terminal line consisting of well-defined but smaller lunules between the veins; cilia of ground colour, except between the veins, where they are fuscous-black.

Hind wing deep chrome (III) with a thin sepia (XXIX) irroration at terminal area; cilia pale orange-yellow (III), except between the veins, where they are sepia.

Under side light orange-yellow; fore wing irrorated at terminal half with saccardo's umber (XXIX) scales; hind wing irrorated with the same colour, but less thickly at costal half near apex. Exp. 47 mill.

Hab. ♂ type.—Durban (11.8.09, bred by Green); in coll., Janse.

Another ♂, very greasy.—Durban (19.7.10, bred by E. L. Clark); in coll., Green.

♀ type.—Durban (14.7.08, Leigh); in coll., Tvl. Mus.

♀ co-types, four specimens.—Durban (I, VII, VIII); in coll., Tvl. Mus., Janse, Green, Clark.

According to a note from Mr. Clark, the larva of this species feeds on "milkweed."

I named this species after Mr. H. A. Green, Durban, who bred several specimens and provided me with ♂ and ♀.

Species *auctororum* :—

Dasychira herbida, Wlk., Cat. VII, p. 1740 (1856).

Dasychira postpura, Hmps., Ann. S.A. Mus., p. 397 (1905).

- Dasychira rubrifilata*, Hmps. n., Ann. S.A. Mus., p. 399 (1905).
Dasychira escota, Hmps. n., Ann. S.A. Mus., p. 399 (1905).
Dasychira libyra, Druce, A. M. N. H. (6), XVII, p. 352 (1896).
Dasychira metathermes, Hmps. n., Ann. S.A. Mus., p. 400 (1905).
Dasychira proleprota, Hmps. n., Ann. S.A. Mus., p. 401 (1905).
Dasychira atrifilata, Hmps. n., Ann. S.A. Mus., p. 401 (1905).
Dasychira extatula, Dist., A. M. N. H. (6), XX, p. 202 (1897).
Dasychira gwelila, Swinh., Trans. Ent. Soc., p. 469 (1903).
Dasychira mascarena, Butl., A. M. N. H. (5), II, p. 294 (1878).
Dasychira bryophilina, Hmps. n., A. M. N. H. (8), V, p. 450 (1910).
Dasychira confinis, Dist., A. M. N. H. (7), IV, p. 360 (1899).
Dasychira poliotis, Hmps. n., A. M. N. H. (8), V, p. 449 (1910).
Dasychira cangia, Druce, Proc. Zool. Soc., Lond., p. 674 (1887).

Genus LÆLIA (pl. V, fig. 3).

Lælia, Steph., Syst. Cat. Brit. II, p. 52 (1829); type *canosa*.

Anthora, Wlk., IV, p. 801 (1855); type *subrosea*

Hmps. n., Ann. S.A. Mus., p. 394 (1905).

Description made from *Lælia bifascia*.

Proboscis very short; palpi just beyond frons, of about length of eye, porrect, with last joint slightly drooping; first joint very small; second joint long and thin; third joint nearly half of second joint and very thin; second joint on under side with rather long hair, but on upper side the hairs are short, leaving the third joint well exposed; third joint with moderate hair only; eye elliptical and less than width of frons, covered on under side by some very long hairs; antennæ bipectinate; shaft well curved; branches in ♂ nearly 8 times as long as thickness of shaft, forming nearly a straight line on under side and ending in 2 bristles; frons, vertex, and thorax covered with long hair; abdomen as long as hind wings; legs covered with long hair; fore tibia with the process only present in ♂, which is long, pointed, and curved over end of tibia outwardly;* mid tibia with 2 spurs; hind tibia with 4 moderate spurs; tarsae with smooth hair.

Fore wing sub-triangular; costa arched near base and apex, but in the middle hollowed out; termen, inner margin, apex, and tornus well rounded; vein 1b simple at base; 2 from about $\frac{2}{3}$ lower median; 3 from $\frac{2}{3}$ the distance between 2 and 4; 4 from lower angle; 5 from well above the angle; discocellular faintly visible, but present; cell over $\frac{1}{2}$ of wing; 6 from upper angle (in *figlina*, however, it originates from about $\frac{3}{4}$ of discocellular; 7 and 8 from a stalk of $\frac{1}{4}$ of 7 and coming from the upper angle; 9 and 10 on an equally long stalk and originating from upper median at $\frac{7}{8}$; 9 at about $\frac{1}{2}$ length of stalk anastomosing with 8 just above its stalk for about $\frac{1}{3}$ free part of 8, so as to form an areole about 2 times longer than broad; 11 from $\frac{6}{8}$ upper median and nearly parallel to 10 and 12; 12 free and somewhat curved.

* In the ♀ of *subrosea* and *diascia* there is a thin process of $\frac{3}{4}$ of tibia, just fitting in the hollow; in the ♂ of *punctulata* the process is only a little longer than the tibia and not curved outwards, while in its ♀ the process is thin and $\frac{2}{3}$ of tibia; in *figlina* it is about as long as the tibia in ♂ and well curved, in its ♀ only as long as half the tibia and very thin.

Hind wing triangular, with the costa gently and the termen and inner margin well rounded; apex and tornus well rounded; *1a* rather long and straight; *1b* straight; 2 from $\frac{2}{3}$ lower median; 3 and 4 from lower angle, stalked or from a point or somewhat apart (in some species rather far apart, but never farther from 4 than 4 is from 5),* and in that case 4 always from lower angle; 5 from about $\frac{1}{3}$ discocellular, which is somewhat angled at $\frac{2}{3}$, and rather faint; cell about $\frac{1}{2}$ of wing; 6 and 7 on a stalk of $\frac{1}{4}$ of 6 and from upper angle; 8 curved to upper median at $\frac{1}{2}$, but not anastomosing with it.

Prof. A. Spuler, in "Schmett. Eur. Bnd.," I, p. 129, states that in *Laelia* vein 10 of fore wing comes from the upper median and is free, while 9 should then come from the upper part of the areole. This is certainly not the case in any South African species, and I have no specimens of the type of the genus to investigate this point. Sir Hampson and E. Meyrick, however, state that vein 10 is as in *Dasychira*, and this agrees with my own observation.

For further comparison of this genus with *Dasychira*, see under that genus.

The following species I removed from this genus: *testatia* and *sericea*, which I bring in *Cropera*, as they both have vein 3 of hind wing farther from 4 than 4 is from 5; moreover, 6 and 7 are on a very short stalk and 8 does not touch the upper median, but just approaches it at $\frac{1}{3}$; *adspersa* I bring in *Crorema* (see there).

Species in South Africa:—

- | | |
|---|--------------------------|
| 1. <i>a.</i> Fore wing without postmedial series of spots..... | * <i>phlebitis</i> . |
| <i>b.</i> Fore wing with more or less distinct postmedial series of spots..... | 2. |
| 2. <i>a.</i> Fore wing with the series of spots incurved below vein 4..... | 3. |
| <i>b.</i> Fore wing with the series of spots excurved below vein 4..... | 4. |
| 3. <i>a.</i> Postmedial spots of fore wing red..... | * <i>fulvinotata</i> . |
| <i>b.</i> Postmedial spots of fore wing dark; ground colour of wings pale lemon-yellow..... | *(?) <i>setinoides</i> . |
| 4. <i>a.</i> Ground colour of fore wing greenish..... | <i>subviridis</i> . |
| <i>b.</i> Ground colour of fore wing not greenish..... | 5. |
| 5. <i>a.</i> Ground colour of both wings light orange-yellow (III) | 6. |
| <i>b.</i> Colour of both wings not light orange-yellow..... | 7. |
| 6. <i>a.</i> Fore wing irrorated with fuscous; of rather small size..... | <i>aureus</i> . |
| <i>b.</i> Fore wing not irrorated with fuscous; size larger.. | <i>punctulata</i> . |
| 7. <i>a.</i> Fore wing sub-hyaline..... | 8. |
| <i>b.</i> Fore wing not sub-hyaline..... | 9. |
| 8. <i>a.</i> Fore wing pale cinnamon-pink (XXIX)..... | <i>subrosea</i> . |
| <i>b.</i> Fore wing light cinnamon-drab (XLVI)..... | <i>xyleutis</i> . |

* In the ♀ of *subrosea* 3 is from 4 almost farther than 4 is from 5; one ♀ of *figlina* has 3 nearly 2 times as far from 4 as 4 is from 5; all other species have 3 and 4 nearly from a point.

9. *a.* Hind wing of ♂ fuscous (XLVI) or thickly irrorated with fuscous..... 12.
b. Hind wing always of a light colour..... 10.
10. *a.* Fore wing with a dark fascia along lower median.. 11.
b. Fore wing without a dark fascia along lower median. 14.
11. *a.* Fore wing with a second fascia near inner margin... *bifascia.*
b. Fore wing without a second fascia; ground colour of fore wing reddish..... *figlina.*
12. *a.* Fore wing of ♂ clay colour (XXIX)..... *swinnyi.* ♂.
b. Fore wing lighter and sprinkled with darker scales.. 13.
13. *a.* Termen of fore wing straight, and surface sprinkled thinly; basal part of hind wing not suffused with fuscous..... *robusta.*
b. Fore wing with the termen rounded; sprinkling thick; whole hind wing suffused with fuscous... *nigripulverea.*
14. *a.* Patagia crimson; fore wing yellow, suffused with crimson..... **haematica.*
b. Patagia of same colour as thorax, never crimson.... 15.
15. *a.* Termen of fore wing straight..... *diascia.*
b. Termen well rounded..... 16.
16. *a.* Fore wing of both sexes greyish-white..... *clarki.*
b. Fore wing yellowish-white; rather more sprinkled with dark scales than ♀ of *clarki*, and much smaller. *swinnyi.* ♀.

Note.—I have not had sufficient data to place *amabilis* in this key.

Lælia punctulata, Butl., A. M. N. H. (4), XVI, p. 400 (1875) (pl. V, fig. 6).

Hmpsn., Ann. S.A. Mus., p. 395 (1905).

Hab. White River (Cooke).
 Pinetown (III, Leigh).
 Durban (XI, Leigh).
 Umkomaas (I, Janse).
 Umgeni (IV).
 Ngqeleni (I–IV, XI, Swinny).
 Port St. Johns (IV, IX, XI, Swinny).
 Uitenhage (XII, Munro).

In the TvI. Mus. are two ♀♀. This sex seems to be seldom captured; they are much lighter than the ♂ [buff-yellow (IV)] and a little bigger (36 mill.).

Lælia subrosea Wlk., Cat. IV, p. 801 (1855) (pl. V, figs. 7, 7a).

Lælia subrufa, Snell., Tijds. v. Ent., XV, p. 39 (1872), and XXII, p. 105 (pl. VIII, fig. 6) (1879).

Lælia rosea, Schaus., S. Leone Lep., p. 26 (pl. I, fig. 3) (1893).

Hmpsn., Ann. S.A. Mus., p. 395 (1905).

Hab. Waterval (Zoutpansberg District) (IV, Janse).
 White River (I, Cooke).
 Durban (IX, Clark).

The hind wings of the ♂ are tinged with orange-pink (II), and are not, as in the ♀, quite white.

Lælia diascia, Hmps. n., Ann. S.A. Mus., p. 395 (1905) (pl. V, fig. 5).

- Hab. Shilovane (XI, Rev. Junod).
 Pretoria (II, Miss Gunning).
 Three Sisters (III, Janse).
 Barberton (XII, Janse).
 New Hanover (II, VII, VIII, Hardenberg).
 Sarnia (VIII, Janse).
 Durban (IV, Leigh) (XI).
 Umkomaas (I, Janse).

Lælia bifascia, Hmps. n., Ann. S.A. Mus., p. 396 (1905) (pl. V, fig. 3).

- Hab. Rietfontein No. 57, Pretoria District (IX, Janse).
 New Hanover (III, VIII, IX, Hardenberg).
 Pinetown (I, Leigh).
 Umkomaas (I, Janse).
 Ngqeleni (III, Swinny).

Lælia figlina, Dist., A. M. N. H. (7), IV, p. 361 (1899) (pl. V, figs. 8, 8a).

- Hmps. n., Ann. S.A. Mus., p. 396 (1905).
 Hab. Pretoria (Dr. H. G. Breyer).
 Lydenburg District (Krantz).
 New Hanover (VII, Hardenberg).
 Stanger, Natal (XII).
 Tongaat.
 Pinetown (I, Leigh).
 Durban (Clark).
 Ngqeleni (I, Swinny).

Lælia xyleutis, Hmps. n., Ann. S.A. Mus., p. 396 (1905) (pl. V, fig. 4).

- Hab. Pretoria (X, Dr. Breyer ; Dr. Gunning ; VIII, XI, XII,
 Lord Gladstone ; XII, Hardenberg ; IX, Janse).

Lælia clarki, nov. spec. (pl. III, figs. 7, 8).

♂. Head, tegulae, patagia, thorax, and front legs pale smoke-grey (XLVI), mixed with blackish scales ; palpi cinnamon-buff (XXIX) ; the second joint with some blackish hairs above ; palpi porrect with the third joint well exposed ; proboscis absent ; mid and hind legs whitish, mixed with some blackish hairs ; antennæ greyish-olive (XLVI) ; abdomen pale smoke-grey (XLVI) above and cartridge-buff (XXX) underneath ; a small tuft of black hairs on second segment of abdomen ; fore wing whitish, thickly sprinkled with light drab (XLVI) scales ; sub-basal well defined till 1b ; antimedial, medial, and postmedial lines indicated by some ochraceous-orange (XV) scales tipped with black ; reniform diffused, edged on inner and outer side with ochraceous-orange, black-tipped scales ; a costal sub-triangular diffused light drab mark at postmedial area ; sub-terminal diffused, light drab, parallel to outer margin till vein 3, then curved inwards and ending at tornus, somewhat dentate at the veins and here and there sprinkled with blackish scales ; terminal represented by

blackish lunules between the veins; cilia light drab. Hind wing pure white.

Under side of fore wing evenly suffused with light drab (XLVI), especially at the veins and at apical and costal area; hind wing white, suffused with cartridge-buff (XXX).

♀. Head, thorax, and abdomen lighter than in ♂; palpi light orange-yellow (III) and with less black hairs than in ♂; shaft of antennæ whitish; branches black at base and further on maize-yellow (IV); fore wing white, sprinkled with light drab scales, but more sparingly than in ♂; lunules and costal mark more distinct than in ♂; hind wing white, but suffused with light drab, especially towards outer margin; under side of fore wing lighter, of hind wing darker, than in ♂.

Exp. ♂ 33·5 mill.; ♀ 38 mill.

Hab. ♂ type from Barberton (14.1.09, G. W. Jeffery), in coll., Janse; co-type, Warmberg (18.2.04, Janse); only 28·5 mill.

♀ type from Umkomaas (30.1.14, Janse).

I studied two more ♀♀ from Durban (16.11.08, XII, Leigh) and one ♀ from Barberton (25.12.10, Janse).

I received one ♀ from Mr. Clark, caught at Durban, which was identified by Mr. A. T. Cooke as *D. diffusa*, but *diffusa* is distinctly the ♀ of *D. municipalis*, as Hampson rightly states in Ann. S.A. Mus., p. 397. Distant's description of *diffusa* does not fit the ♀ of *L. clarki* at all, and the ♂ of this species is different to the ♂ of *municipalis*, though not so much as the ♀. Moreover, this is not a *Dasychira*, but a *Laelia*, as the palpi, the process of the fore legs, and the venation clearly indicate, they only differ from the typical *Laelia* in having vein 3 and 4 stalked in all the specimens I examined.

Laelia subviridis, nov. spec. (pl. III, fig. 9).

♂. Hair of head and thorax vinaceous-buff (XL), mixed with many yellowish-oil-green (V) and blackish hairs; palpi avellaneous (XL), mixed at sides and thickly at base of third joint with fuscous (XLVI) hairs; patagia yellowish-oil-green, tipped with blackish hairs; antennæ with shaft black, scaled so as to leave black rings with yellowish-oil-green scales; branches black; thorax on under side and legs pinkish-buff (XXIX); tibiae and tarsae ringed with fuscous-black hairs; abdomen somewhat greasy, but showing in many parts pinkish-buff scales and hairs.

Fore wing ground colour pale olive-buff (XL), thickly irrorated with deep grape-green (XLI) and fuscous scales; sub-basal line represented by black scales from costa till *1b*; antimedial black, double near costa, outer line becoming indistinct beyond cell and inner line angled at all veins and folds, edged on outer side by diffused ground colour; medial line distinct, black and on inner side with dark olive-buff (XL) irroration and on outer side by ground colour, sharply angled outwards at upper median and discal fold, and inwards at lower median, median fold, and below *1b*; reniform of fuscous-black scales, partly edged on outer and inner sides by ground colour; postmedial fuscous-black, partly edged on outer side by ground colour, from costa straight to stalk of 9, 10, then

along stalk, then angled at 5, 4, and turned inwards at 3 and still more at 2, and somewhat angled at median fold and 1b; sub-terminal indistinct, broad, fuscous-black; terminal sharply defined and consisting of a black line angled at each vein; cilia fuscous and of ground colour at end of veins.

Hind wing avellaneous, suffused with fuscous-black, thinly at basal $\frac{1}{2}$ and thickly at terminal $\frac{1}{2}$; cilia fuscous.

Under side of both wings avellaneous, thickly irrorated with fuscous; reniform in both wings distinct, fuscous; postmedial of both wings fuscous, diffused on edges and rather broad.

Exp. 36.2 mill. One specimen only.

Hab. Type, ♂ from Waterval Onder (Feb., 1912, Bonnekamp); in coll., Janse.

Lælia swinnyi, nov. spec. (pl. III, figs. 10, 11).

♂. Head, shaft of antennæ, thorax above and ground colour of fore wing clay colour (XXIX); palpi cinnamon-buff (XXIX), with base of third joint fuscous (XLVI); branches of antennæ blackish; thorax on under side, legs, and abdomen Saccardo's umber (XXIX). Fore wing thinly sprinkled with Saccardo's umber; sub-basal, medial, postmedial, and sub-terminal lines indicated by some fuscous scales, the first three originating from near costa and ending at median fold; terminal represented by a series of fuscous dots between the vein; cilia of ground colour. Hind wing with ground colour chamois (XXX), thickly irrorated with fuscous; cilia chamois, well mixed with fuscous.

Under side ground colour chamois; fore wing thickly, and hind wing much less, irrorated with fuscous; hind wing with a glittering appearance; cilia as on upper side.

♀. Head, palpi, shaft of antennæ, thorax, legs, patagia, and abdomen whitish, tinged with light buff (XV) and sprinkled with some fuscous; fore wing whitish, sprinkled with some fuscous scales; sub-basal only represented by some fuscous-black (XLVI) scales; antimedial line also indicated by such scales from upper median till inner margin; medial very indistinct; reniform only consisting of some fuscous-black scales; postmedial and sub-terminal faint and beginning at costa as a dark irroration; terminal represented by a series of dots, as in ♂; cilia whitish, mixed with fuscous. Hind wing white, with slight irroration at terminal area; medial line faintly represented; cilia more white than on fore wing.

Under side with ground colour white; fore wing sprinkled at costal and terminal area with fuscous; a fuscous irroration at postmedial area, continued but getting narrower over hind wing and fainter towards tornus of hind wing; on hind wing sprinkling more sparingly; cilia as on upper side.

Exp. ♂ type, 29.2 mill.; ♀ type, 31.2 mill.

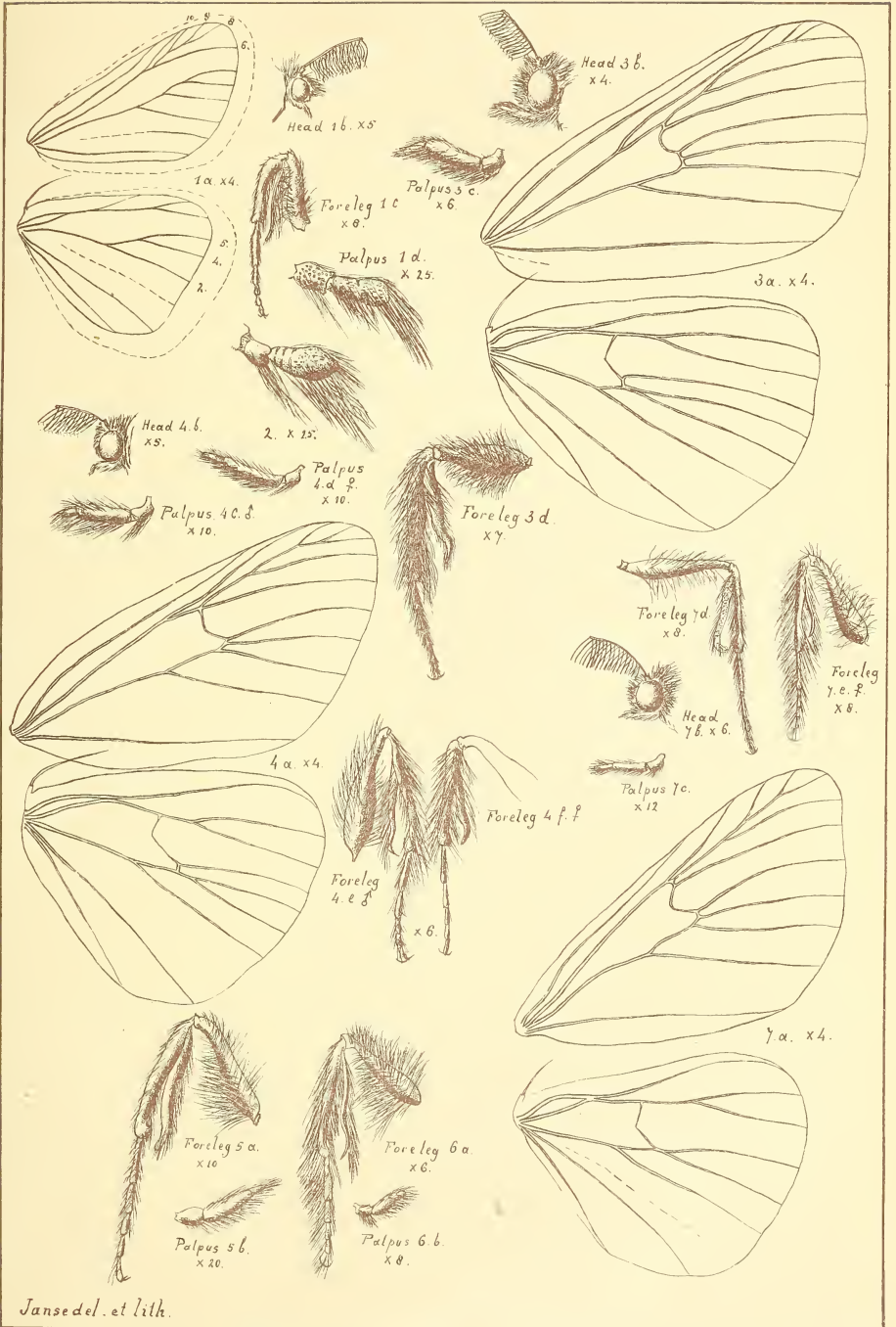
Hab. ♂ type, Port St. Johns (29.8.08, H. H. Swinny).

♀ type, Port St. Johns (29.8.08, H. H. Swinny).

Four ♂♂ co-types from Port St. Johns (29.8.08, 4.4.08;

Ngqeleni, 13.1.07, 1.8.08, H. H. Swinny).

One ♀ co-type from Moorddrift (7-19.10.07, C. J. Swierstra).



Jansedel. et lith.

1. *Micraroa fulvescens*, Hmps n ♂; 2. *M. minima*, nov. spec. ♂; 3. *Homochira rendalli*, Dist. ♂; 4. *Euproctis fasciata*, Wik. ♂; 5. *E. bicolor*, nov. spec. ♂; 6. *E. iridescens*, nov. spec. ♂; 7. *Porthesia natalensis*, nov. spec. ♂.

Types in coll., Tvl. Mus.; co-types in coll., Tvl. Mus., and coll., Janse.

♂ and ♀ have the hind wing with vein 3 and 4 on a stalk of $\frac{1}{4}$ or $\frac{1}{3}$, and the stalk of 8 and 9 of fore wing is longer than usually.

I have little doubt that the ♀ belongs to the ♂, though in general appearance they do not resemble each other much; the structure, however, is very much the same, and the ♂ and ♀ types were caught on the same day and in the same locality.

I do not know any *Lælia* to which this species comes near.

Lælia aureus, nov. spec. (pl. III, fig. 12).

♂. Head, palpi, tegulae, thorax on under side, abdomen, ground colour of fore wing and hind wing light orange-yellow (III); on vertex those hairs are mixed with hairs of an ochraceous-tawny (XV) colour; thorax above covered with ochraceous-tawny hairs; shaft of antennæ ochraceous-tawny; branches blackish; fore wing thickly irrorated with ochraceous-tawny scales, but less thickly on inner margin; sub-basal line indicated by some blackish tipped scales, by which also the orbicular and reniform are represented, while above the orbicular near costa a fuscous irroration indicates the medial line; postmedial line faint and of blackish tipped scales, oblique, well rounded from costa till vein 3, then curved inwards at vein 2; sub-terminal faint and made of blackish tipped scales, parallel to apex and termen as far as vein 3, then slightly curved inwards; terminal represented by a few blackish scales only; cilia ochraceous-tawny; hind wing and cilia of ground colour, without the irroration or any marking, but slightly lighter at basal area.

Under side light orange-yellow; fore wing somewhat irrorated with ochraceous-tawny, except a costal streak, and more thickly at apical and terminal area.

Hind wing has vein 3 and 4 on a stalk of $\frac{1}{3}$.

Exp. 23·5 mill.

Hab. Only one specimen, from Umkomaas (10.1.14, Janse).

This species comes close to *L. punctulata*, from which it may be distinguished by the irrorated fore wing, its much smaller size, and the differently running sub-terminal line.

Lælia robusta, nov. spec. (pl. III, fig. 13).

♂. Head, palpi, shaft and branches of antennæ, thorax, ground colour of fore wing, tibiae and tarsae of legs pinkish-buff (XXIX); palpi with some fuscous (XLVI) scales at side; at base of antennæ a few fuscous scales; thorax below, femora of all legs, and the abdomen dorsally at base, the sides, and the under side, whitish; further part of abdomen above pinkish-buff, mixed with some fuscous hairs.

Fore wing with the inner marginal area somewhat lighter than the ground colour; whole wing, except inner marginal area, evenly sprinkled with fuscous; a few dark scales at place of sub-basal line; reniform only represented by some fuscous scales; postmedial indicated by a series of fuscous-black (XLVI) scales, in the shape of a lunule at between veins 6-5 and 5-4, then of small spots between 4-3 and 3-2 and a larger rounded

spot between 2-1*b*; sub-terminal represented by some diffused fuscous maculae, obliquely placed between veins 7-5, angled inwards at 5-4, nearer to termen at 4-3 and indistinctly at between 3-2; cilia light pinkish-cinnamon (XXIX), mixed with some fuscous.

Hind wing whitish, thickly irrorated with fuscous scales, except at basal, costal, and part of inner marginal area; on the veins the irroration is also much thinner; cilia whitish, mixed with pinkish-buff.

Under side whitish; fore wing well sprinkled and hind wing only thinly sprinkled with fuscous; fore wing with some diffused postmedial maculae from veins 2-7; cilia as on upper side.

Exp. 37·9 mill. One ♂ specimen only.

Hab. Durban (Green); type in coll., Janse.

In shape of fore wing this species is very much like *L. diascia*, and may be separated from this species by the ground colour of the fore wing, the postmedial series of spots, the maculae on sub-terminal line, and its suffused hind wing; besides it is much larger than *L. diascia*.

***Lælia nigri-pulverea*, nov. spec.** (pl. III, fig. 14).

♀. Head, palpi, antennæ, thorax, and legs light pinkish-cinnamon (XXIX), mixed with tawny-olive (XXIX) and fuscous (XLVI) hairs; abdomen above pinkish-buff (XXIX), on under side vinaceous-cinnamon (XXIX); fore wing with ground colour light pinkish-cinnamon, thickly sprinkled over whole wing, except last $\frac{1}{3}$ of cell, with black and sayal brown (XXIX); at place of reniform a black streak along lower median and a black point near upper angle; a blackish sub-terminal irroration from costa till vein 6, and six black spots between the veins from 1*b* till 7, indicating the subterminal line; termen represented by rather large black spots between the veins; cilia of ground colour, mixed with fuscous.

Hind wing pinkish-buff (XXIX), well suffused with fuscous, except at basal part; cilia light drab (XLVI).

Under side whitish; fore wing and hind wing, except basal part, thickly sprinkled with fuscous; cilia as on upper side.

Exp. 37·6 mill. One ♀ specimen only.

Hab. Pretoria (21.9.11, Janse).

This species is very much like ♀ of *L. swinnyi*, but the fore wing is much more thickly sprinkled and the hind wing is also darker; the body is more robust and darker on upper and under side, the legs have also a quite different colour.

Species *auctorum* :—

Lælia phlebitis, Hmps., Ann. S.A. Mus., p. 394 (1905).

Lælia setinoides, Holl., Psyche, VI, p. 431 (1893).

Hmps., Ann. S.A. Mus., p. 395 (1905).

Lælia fulvinotata, Butl., P. Z. S. L., p. 678 (1893).

Lælia haematica, Hmps., Ann. S.A. Mus., p. 395 (1905).

Lælia amabilis, Auriv., Öfv. Vet. Akad. Förh., XXXVI (7), p. 58 (1879).

Hmps., Ann. S.A. Mus., p. 396 (1905).

Genus *PSALIS* (pl. V, fig. 9).

Psalis, Hübn., Zütr., 2, p. 19 (1827); non-descr.

Moore, Lep. Ceyl., II, p. 94 (1882); type *securis*.

Hmps., Ann. S.A. Mus., p. 393 (1905).

Proboscis absent; palpi just beyond frons, about of length of eye, slightly drooping, and thickly covered with long hair; first joint very small; second joint very large and thick towards end, somewhat pear-shaped and bent at beginning; third joint absent; eye elliptical, about $\frac{3}{4}$ of frons; antennæ of ♂ very much curved, bipectinate; longest branches about 8 to 10 times thickness of shaft, ending in 2 long bristles and on inner side also curved, especially towards apex; basal joint of shaft thick; in ♀ the antennæ are a little shorter, slightly pectinated, and pecten getting gradually shorter and ending in 2 short bristles; vertex covered with woolly hair; frons with a well developed pointed tuft; thorax covered with long woolly hair; abdomen a little longer than hind wing, in ♂ often with more or less developed woolly crests; fore tibia with a long pointed outwardly curved process (even longer than in any *Laelia*); femora, tibiae, processes, and tarsae with long spreading hairs; in the ♀ the process is absent, but the hairs are much longer; mid and hind legs with long spreading hairs; mid tibia with 2 spurs; hind tibia with 4 spurs.

Fore wing in ♂ sub-triangular; costa very much arched; termen very oblique, straight; inner margin somewhat rounded; apex well rounded; tornus rounded (in ♀ the wing is more elongate; costa more arched, especially towards apex; termen very oblique and hollowed out near apex; inner margin as in ♂; apex very much produced; tornus well rounded); vein 1*b* simple at base; 2 from $\frac{3}{4}$ of lower median; 3 from $\frac{7}{8}$ of lower median; 4 from angle; 5 from just above the angle; discocellular present and angled inwards; cell about $\frac{1}{2}$ of wing; 6 from just below upper angle; 7 stalked with 8 for $\frac{1}{4}$ of vein 7, stalk from upper angle; 9 stalked with 10 for $\frac{2}{3}$ of 9 and from $\frac{1}{5}$ upper median; 9 approaching 8 a little beyond the stalk and anastomosing for $\frac{1}{2}$ the free length of 8, so as to form a rather long areole; 11 from $\frac{2}{3}$ upper median; 12 nearly parallel to costa.

Hind wing triangular; costa slightly hollowed out at middle; termen a little lobate at vein 2-5; inner margin evenly rounded; apex and tornus well rounded; 1*a* long and straight; 1*b* at middle of 1*a* and 2; 2 from $\frac{2}{3}$ of lower median; 3 and 4 on a short stalk or from a point at lower angle, or sometimes a little apart; 5 from well above the angle; discocellular faintly represented, oblique, and angled at about $\frac{2}{3}$; cell over $\frac{1}{2}$ of wing; 6 and 7 on a stalk of $\frac{1}{4}$ and from upper angle; 8 bent towards upper median at $\frac{1}{2}$ and slightly touching it.

I think that this genus has developed from *Dasychira* almost parallel to *Laelia*, from which it differs in its two-jointed palpi. This character also separates *Psalis* from *Dasychira*, and I therefore do not see how this genus can be taken as a sub-genus of *Dasychira*. It is true that the neuration is very much alike in the three genera, but the process of the fore tibia and the missing third joint of the palpi is, I think, sufficient to keep it separate. There is less difference between *Dasychira* and *Laelia* than there is between *Dasychira* and *Psalis*.

Only one species is known of this genus, but that species has a wide distribution, as it is found all over British India, Ceylon, Burmah, Java, Australia, South Africa, and British East Africa.

Psalis securis, Hüb., Zütr., 2, p. 19 (figs. 291, 292) (1827).

Hmpsn., Ann. S.A. Mus., p. 393 (1905).

- Hab. Preterria (XI, Janse ; I, Swierstra).
 Pietersburg (XI, Janse).
 Modderfontein (III, Buckle).
 Rietfontein No. 57 (XII, Janse).
 Carolina (XI, Radermacher).
 White River (VIII, Cooke).
 Camperdown (III, IV, Leigh).
 Sarnia (I, Janse).
 Durban (XII, Leigh).
 Umkomaas (I, Janse).
 Ngqeleni (XII, Swinny).

LYMANTRIA (pl. VI, fig. 1).

Lymantria, Hüb., Verz., p. 160 (1827) ; type *monacha*.

Morasa, Wlk., IV, p. 859 (1855) ; type *modesta*.

Sarothropyga, Feld., Reis. Nov., p. 8 (1875) ; non-descr. ; type *modesta*.

Hmpsn., Ann. S.A. Mus., p. 410 (1905).

Range : Europe, Japan, India, Ceylon, Burmah, Java, Amboina, Celebes, Australia, South Africa.

♂. Proboscis absent ; palpi moderate, reaching well beyond frons, slightly ascending, very hairy on under side ; first joint a little longer than broad ; second joint almost as long as first, cylindrical ; third joint thinner than second joint and about $\frac{2}{3}$ of its length ; first and second joints with long hair on under side ; eyes large, about width of frons, rounded ; frons rounded and with long hair ; antennæ as long as $\frac{1}{2}$ the costa, bipectinate ; branches at middle 8 times the shaft (in ♀ only 3 times shaft), suddenly getting shorter towards apex and ending in one bristle ; basal joint of shaft large and with a long hairy tuft in front ; thorax covered with long woolly hair ; abdomen with rather long hair above, especially at first segment ; anal tuft of long spreading hairs ; in ♀ there is an ovipositor, as there is in *Lymantria monacha*, but some European species may have the anal part woolly ; legs with rather thick hair on femora and tibiae, especially in the fore legs ; fore tibia with a process as long as tibia, getting very broad towards end and there obliquely rounded and ending in a hairy tuft ; in ♀ the process is much shorter and of even thickness over whole length ; mid tibia with terminal spurs ; hind tibia with 4 spurs.

Fore wing sub-triangular ; costa and inner margin slightly hollowed out ; apex, termen, and tornus rounded ; a trace of 1a ; 3 from $\frac{3}{4}$ to $\frac{4}{5}$ of ower median ; 3 from $\frac{2}{3}$ the distance 2 to 4 ; 4 from lower angle ; 5 from

a little above the angle; discocellular oblique; cell of about $\frac{1}{2}$ of wing; 6 from $\frac{3}{4}$ discocellular; stalk of 7, 8, 9, 10 from upper angle; 7 from stalk beyond 10, at from nearly $\frac{1}{3}$ of 8; 9 from 8 at $\frac{2}{3}$; 10 from beyond $\frac{1}{2}$ stalk of 7, 8, 9; 11 from upper median at beyond $\frac{3}{4}$, bent upwards at $\frac{1}{6}$ and well touching 12, then parallel to 10; 12 parallel to costa, till where it touches 11. In ♀ 10 comes from before $\frac{1}{2}$ stalk of 7, 8, 9, and 11 quite anastomoses with 12. (Turner, *l.c.* p. 471, mentions that *Axiologa*, Turner, has vein 11 anastomosing with 12, but this genus has also an areole. It may be found necessary to create a new genus for *modesta*, as the process of the fore tibia is also quite peculiar.)

Hind wing triangular; costa and inner margin well hollowed out; apex, termen, and tornus much rounded; at tornus a slightly rounded lobe from 1a to 2; 1a very long and near inner margin; 2 from $\frac{2}{3}$ lower median; 3 from close to lower angle; 4 from the angle; 5 from above angle about 2 times as far as 3; cell over $\frac{1}{2}$ of wing; discocellular very oblique, sharply angled at $\frac{2}{3}$ of distance 5 to 6; 6 from below upper angle; 7 from angle; upper median angled at $\frac{1}{2}$, so as to meet 8, which is hollowed out there and connected with upper median beyond $\frac{1}{2}$ by a short oblique bar; in ♀ this bar is less distinct and the veins touch each other; also 3 and 4 are there from lower angle; 6 and 7 from upper angle.

The touching of vein 11 and 12 in fore wing is rather peculiar and was found in all specimens I examined (sixteen specimens), though about 50 per cent. only touch and the remainder *actually anastomose*.

In the ♀ of *L. monacha* (I possessed no ♂) from Europe these veins come close to each other, but do not touch; this is also the case in *L. albimacula*, Wlgrn.

In *albimacula* vein 3 is 2 times farther from 4 in the fore wing than in *modesta* and the palpi are much less hairy, while the process of the fore tibia is of even width and not dilated at end; in the ♀ the process is longer than in the ♀ of *modesta*.

1. a. Hind wing tinged with geranium-pink (I) in ♂; in ♀ the hind wing is more tinged with pink and thinly suffused on terminal area with fuscous..... *modesta*.
- b. Hind wing in both sexes cartridge-buff (XXX), tinged with Naples yellow (XVI)..... *albimacula*.

Species in South Africa:—

Lymantria modesta, Wlk., IV, p. 859 (1855).

Sarothopyga rhodopepla, Feld., Reis. Nov. (pl. 100, fig. 23) (1875).

Hmpsn., Ann. S.A. Mus., p. 410 (1905).

Hab. Waterval, Zoutpansberg District (XI, Janse).

Barberton (XII, I, Janse; V, Munroe).

Sarnia (VIII, Janse).

Pinetown (Janse).

Durban (XII, Leigh; X, Ross). IV.

Estcourt (Natal).

Umkomaas (I, Janse).

Lymantria albimacula, Willgrn., Lep. Het. Caffr. Köngl. Svens. Vet.

Akad. Handl., Bd. V, No. 4, p. 35 (1865).

Aclonophlebia mosera, Druce, A. M. N. H. (7), I, p. 208 (1898).

Hmpsn., Ann. S.A. Mus., p. 405 (1905).

This species is not an *Aclonophlebia* as Hampson states, *l.c.* p. 405, as it has 4 spurs on the hind legs and not 2 as is the case in *Aclonophlebia*.

Hab. Warmberg, Zoutpansberg District (II, Janse).¹

Durban (Clark).

Umkomaas (I, Janse).

Genus POLYMONA (pl. VI, fig. 2).

Polymona, Wlk., III, p. 768 (1855); type *rufifemur*.

Hmpsn., Ann. S.A. Mus., p. 410 (1905).

♂. Proboscis absent; palpi short, not quite reaching frons, drooping a little; first joint a little longer than thick, with long hair on under side; second joint $1\frac{1}{2}$ times first joint, with long hair on under side pointing forward; third joint as long as first, with some hair and somewhat hidden in the hair of the second joint; eyes large, elliptical, about width of frons; frons rounded, covered with woolly hair; vertex with long hair; antennæ $\frac{1}{3}$ of costa, bpectinate; shaft much curved; pecten about 8 times shaft, in ♀ about 4 times; pecten ciliated and ending in a long bristle; thorax clothed with long hair; abdomen a little longer than hind wing, covered with woolly hair and a moderate tuft of spreading hair at first segment; tibiae with very long hair; fore leg with tibia in both sexes with a process, which in the ♂ is about as long as the tibia, thick and with long hair on outer side, in ♀ thinner and apparently with a short second joint, also covered with long hair; mid and hind tibiae each with 2 terminal spurs only.

Fore wing triangular; costa, inner and outer margin nearly straight; apex and tornus well rounded; 1*b* simple at base; 2 from beyond $\frac{2}{3}$ lower median; 3 from a little farther from 4 than 4 is from 5; 4 from lower angle; 5 from a little above angle; discocellular very oblique and hollowed at middle; cell over $\frac{1}{2}$ of wing; 6 from a little below upper angle; stalk of 7, 8, 9, 10 from upper angle; 7 from before $\frac{1}{4}$ of 9; 8 from $\frac{3}{4}$ of 9; 10 from $\frac{1}{3}$ of stalk 7, 8, 9; 10 a little curved and for some distance parallel to stalk 7, 8, 9; 11 from $\frac{5}{6}$ of upper median, nearly straight; 12 nearly parallel to costa.

Hind wing triangular; costa and inner margin nearly straight; outer margin well curved from vein 1*b* till 7; apex and tornus well rounded; 1*a* long, straight; 1*b* a little curved; 1*c* faintly indicated; 2 from $\frac{2}{3}$ lower median; 3 and 4 from close to lower angle; 5 from well above the angle (about 3 times the distance of 3 to 4); discocellular very oblique, directed inward, angled beyond $\frac{1}{2}$; cell a little over $\frac{1}{2}$ of wing; 6 from below upper angle; 7 from angle; 8 curved towards upper median at beyond $\frac{1}{2}$, where also upper median is angled, and just touching it, then parallel to costa.

Hampson, *l.c.* p. 410, treats this genus as a synonym of *Lymantria*, but I think it is sufficiently distinct to keep it separate. The process of the fore leg is much as in *Dasychira* and the palpi are quite different; 12

shows no tendency to approach II, while the hind legs have only 2 spurs. I look upon this genus as a development from *Lymantria* parallel to *Aclonophlebia*, from which it differs in position of vein 5, 7, and 10 in fore wing and of 3, 5, 7, and 8 of hind wing; the third joint of the palpi and the process of fore legs; moreover, this process is absent in the ♀ of *Aclonophlebia*.

Only one species is known to me:—

Polymona ruffemur, Wik., Cat. III, p. 768 (1855).

Dist., A. M. N. H. (6), XX, p. 200.

Hab. Pretoria (II, XII, Janse).

Van der Merwe Station (XII, Janse).

Waterval Onder (XII, Bonnekamp).

Barberton (V, Jeffery).

New Hanover (VIII, IX, Hardenberg).

ACLONOPHLEBIA (pl. VI, fig. 3).

Aclonophlebia, Butl., P. Z. S., p. 428 (1898); type *flavinotata*.

Hmps., Ann. S.A. Mus., p. 405 (1905).

Description made from *rhodalipha*, Feld.

Proboscis absent; palpi just projecting beyond frons; third joint slightly drooping; first joint cylindrical, a little longer than broad; second joint over 2 times first joint, but of same thickness; third joint about $\frac{1}{2}$ the length of second joint, very thin; first and second joints with long woolly hair, moderately dense; third joint less hairy; eyes large, of width of frons; frons smooth, covered with woolly hair; antennæ short, about $\frac{1}{4}$ of costa, much curved, bipectinate; basal joint of shaft with a hair tuft; branches in ♂ 6 times shaft, longest at $\frac{1}{3}$; branches ciliated; in ♀ the branches are shorter, about 2 times shaft, less ciliated, and ending in some bristles; thorax and abdomen covered with long hair; abdomen less than hind wing in length; legs moderately clothed with hair on tibiae; tarsae with short hair; fore tibia with a pointed, thin process as long as the tibia; mid and hind tibiae with 2 short conical terminal spurs.

Fore wing sub-triangular; costa and inner margin straight; outer margin slightly rounded at vein 2 to 6; apex and tornus well rounded; 1b simple at base; 2 from beyond $\frac{2}{3}$ lower median; 3 from $\frac{2}{3}$ distance 2 to 4; 4 from lower angle; 5 from just above the angle; discocellular somewhat angled at $\frac{1}{3}$, rather erect; cell a little over $\frac{1}{2}$ of wing; 6 from below upper angle; stalk of 7, 8, 9, 10 from angle; 7 from about $\frac{1}{3}$ of 9; 8 from $\frac{2}{3}$ of 9; 10 from before $\frac{1}{2}$ of stalk 7, 8, 9, much curved; 11 from $\frac{3}{4}$ upper median, curved to approach 10; 12 straight.

Hind wing triangular; costa and inner margin slightly and outer margin much rounded; apex and tornus well rounded; 1a long and straight; 1b straight; 1c faintly represented; 2 from $\frac{2}{3}$ lower median; 3 from close to angle; 4 from angle and 5 from a little above it; discocellular very oblique and somewhat angled near vein 6; 6 from just below

upper angle; 7 from the angle; 8 approaching upper median at $\frac{1}{2}$, but not touching it.

1. a. Hind wing yellow..... **lugardi*.
- b. Hind wing pale crimson..... **rhodea*.
- c. Hind wing white..... *rhodalipha*.

Aclonophlebia rhodalipha, Feld., Re's Nov. (pl. 100, fig. 25) (1874).

Aclonophlebia tessellata, Dist., A. M. N. H. (6), XX, p. 201 (1897).

Hmpsn., Ann. S.A. Mus., p. 406 (1905).

Hab. Durban (Leigh; XII, Clark).

Green Point (Natal) (I).

This is the only species known to me by specimens. As explained under the genus *Lymantria*, *albimaculata* (*mosera*) has to come out of the genus *Aclonophlebia*, as that species has 4 spurs on the hind legs.

Species auctorum:—

Aclonophlebia lugardi, Swinh., Trans. Ent. Soc., p. 493 (1903).

Aclonophlebia rhodea, Hmpsn., Ann. S.A. Mus., p. 405 (1905).

ORNITHOPSYCHE (pl. VI, fig. 4).

Ornithopsyche, Wilgrn., Het. Kaff. Kongl. Svenska Vet. Aka. Handl.

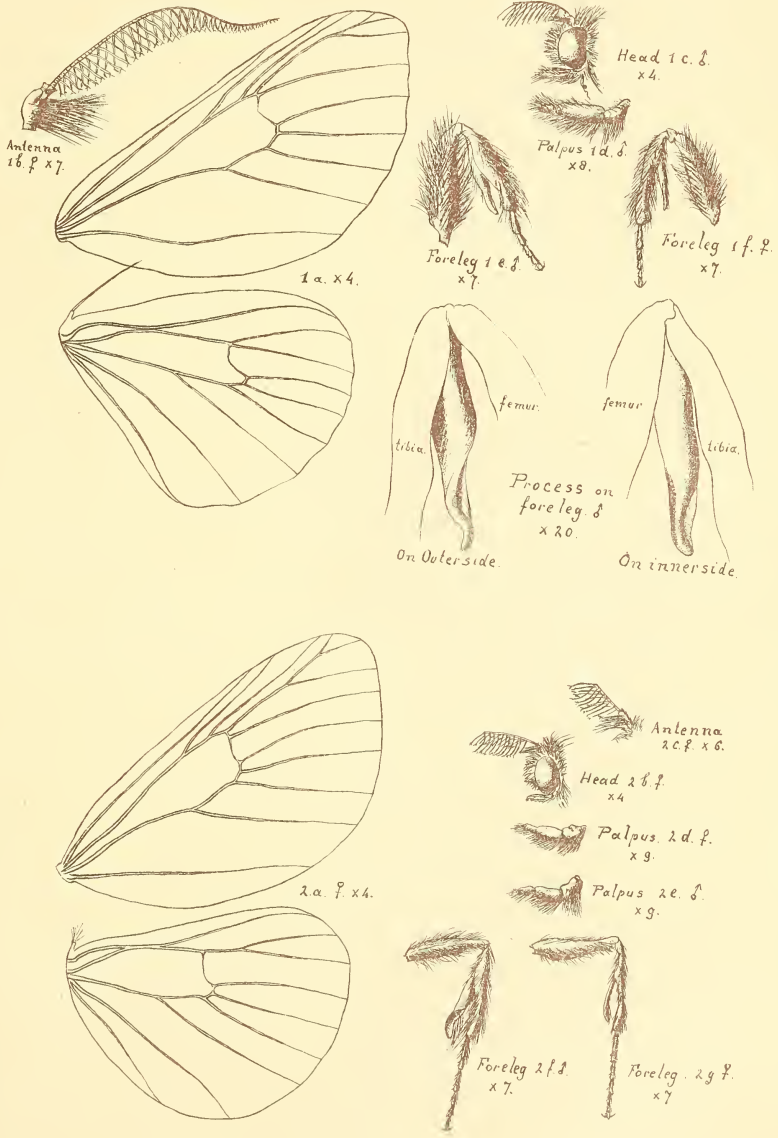
Bnd. V, No. 4, p. 35 (1865); type *discalis*.

Hmpsn., Ann. S.A. Mus., p. 408 (1905).

♂. Proboscis absent; palpi slightly ascending, long, about 2 times the eye, thickly hairy underneath; first joint small, as long as broad; second joint of same thickness, but 4 times length of first joint, slightly rostrate; third joint nearly 2 times first joint, thin, porrect, and somewhat hidden in hairs of first joint; in ♀ second joint more straight, more ascending; third joint in line with second joint;* eyes moderate, not as large as width of frons, elliptical; frons rounded, covered with short hair; antennæ bipectinate, about as long as $\frac{1}{2}$ length of costa; shaft curved; basal joint rather large and with a hair tuft; branches 6 times shaft, ending in two bristles; in ♀ the antennæ are $\frac{1}{3}$ of costa and the branches, are only 2 times shaft; thorax covered with moderate hairs; abdomen shorter than hind wings, with no crests; fore tibia with a long process, curved outwards over tibia (in *O. difficilis* the process is much shorter and is not bent over the tibia; in *O. quadrimaculata* the process is normal, but does not curve over the tibia); mid tibia with 2, hind tibia with 4, long spurs; in ♀ the abdomen is pointed and without a woolly tuft.

Fore wing short and broad; costa somewhat rounded; termen erect, rounded at veins 2-6; inner margin nearly straight; apex and tornus well rounded; 1b simple at base; 2 from beyond $\frac{1}{2}$ lower median; 3 from $\frac{3}{4}$ distance between 2-4; 4 from lower angle; 5 from a little above the angle; discocellular indistinct, from vein 5 to 6 somewhat curved; cell only $\frac{1}{2}$ length of wing; 6 from $\frac{2}{3}$ discocellular; 7 a very little stalked with stalk of 8, 9, 10, which comes from the upper angle; 8 from a little beyond

* In *O. difficilis* the second joint is shorter and not rostrate; third joint is much shorter and drooping.



Janse del. et lith.

1. *Naroma signifera*, Wlk. ♂; 2. *Pteredoa monosticta*, Butl. ♀.

$\frac{1}{2}$ of the whole of vein 9; 10 from before $\frac{1}{2}$ of stalk 8-9; 11 parallel to stalk and vein 10 and originating just opposite vein 2 from upper median; 12 parallel to costa for a long distance.

Hind wing large, wider from costa to tornus than from base to termen; costa and outer margin from *1b* to 6 much rounded; inner margin straight; apex and tornus rounded; *1a* very long, somewhat curved; *1b* straight; 2 from $\frac{2}{3}$ lower median; 3 and 4 from lower angle; 5 from a little above the angle; discocellular faint, rounded; cell less than $\frac{1}{2}$ of wing; 6 and 7 on a short stalk and from upper angle; 8 curved towards upper median at bend, touching it and then nearly straight towards apex; upper median bent at $\frac{1}{3}$.

As Prof. Aurivillius pointed out (*l.c.* p. 65), the type species (*discalis*) of the genus *Aroa* does not fit in with Walker's *Aroa* at all, as Walker states that the palpi are short, third joint very small, and that the ♀ has the abdomen woolly at the end; this is certainly not so in *discalis*. He also states that veins 3, 4, and 5 of hind wing are at equal distance and that 2 is 2 times further from 3 than 3 is from 4. This is not so in *O. discalis* and also not in the genus *Euproctis*, to which genus the description applies mostly, and of which *Aroa* is a synonym. Moreover, all other species placed by Walker in *Aroa* are clearly members of the genus *Euproctis*, except *adspersa*, which Walker queries himself.

The genus *Aroa*, described by Sir Hampson in "Moths of India," Vol. I, p. 433, does certainly not fit *discalis*, nor does fig. 304, as *discalis* has no areole, 6 is from far below 7, 3 is nearer to 4, and *1b* is simple at base in the fore wing; 3 and 4 are not apart and 8 has no bar to upper median in the hind wing. Besides he gives *Bazisa* as a synonym of *Aroa*, a genus quite distinct, as seen in this paper and as admitted by Hampson in his "South African Moths" (1905). He also places *Aroa* near the genus *Orgyia*, but *discalis* is certainly not related to this genus. Swinhoe places species of most different genera in *Aroa*, e.g. all species of *Lacipa*.

I therefore think that Wailengren's name has to be used, as there is no doubt that his *hypoxantha* is the same as Walker's *discalis*.

Species in South Africa:—

1. *a.* Hind wing black or fuscous-black (XLVI)..... 2.
b. Hind wing deep chrome with broad streaks of fuscous-black..... 3.
2. *a.* Fore wing with the ground colour black..... *melanoleuca*.
b. Fore wing with the ground colour mahogany red (II) *quadrimaculata*.
3. *a.* Fore wing with an oblique deep chrome band in ♂;
in ♀ with a nearly oblique postmedial line..... *discalis*.
b. Fore wing without any deep chrome in ♂; ♀ with
postmedial line much angled..... *difficilis*.

Ornithopsyche discalis, Wlk., Cat. IV, p. 792 (1855).

Ornithopsyche ochraceata, Wlk., XXXII, p. 327 (1865).

Hampson., Ann. S.A. Mus., p. 409 (1905).

Ornithopsyche signata, Wlk., XXXII, p. 328 (1865).

Ornithopsyche hypoxantha, Willgrn., K. Vet. Akad. Handl. (2) V (4), p. 35 (1865).

Feld, Reis. Nov. (pl. 100, fig. 4).

- Hab. Woodbush Village (XII, Swierstra).
 Waterval Onder (II, Bonnekamp).
 White River (X, Cooke).
 Three Sisters (II, Janse).
 Barberton (I, Janse).
 New Hanover (IX, Hardenberg).
 Malalane (II, Gould).
 Sarnia (X, I, VIII, Janse).
 Durban (I, V, IX, XI, Leigh).
 Tongaat (Natal).
 Umkomaas (I, Janse).
 Ngqeleni (I, VIII, Swinny).
 Port St. Johns (I, VIII, Swinny).
 Que-que (Rhodesia).

Ornithopsyche difficilis, Wlk., XXXII, p. 328 (1865) (pl. VI, figs. 5, 5a).
 Hmps., Ann. S.A. Mus., p. 410 (1905).

- Hab. Natal (? Durban, Clark).
 Durban (VI, XII, Leigh).

This species is placed by Hampson in the genus *Homochira* on account of its crests. In the five specimens I have seen, only one crest is present, and this crest is very small and much less distinct than the smallest crest in *H. rendalli*. The fore wing of *difficilis* is nearly as in *discalis*, the stalk of vein 7 is a little longer and 6 is about $\frac{1}{2}$ way nearer to 7; the hind wing has 3 and 4 almost stalked and the stalk of 6 and 7 is 2 times longer, while 8 touches the upper median at $\frac{1}{2}$. The stalks of 3-4 and 6-7 seem to vary in both genera. The biggest difference is in the process of the fore tibia, which is shorter and less curved; the palpi are also shorter and the third joint is more drooping. Taking further the peculiar marking of the hind wings in consideration, there can be little doubt that it is better placed in the genus *Ornithopsyche* and may be looked upon as a connecting link between that genus and *Homochira*.

Ornithopsyche quadrimaculata, nov. spec. (pl. VI, fig. 6; pl. III, fig. 16).

♂. Head, thorax, and palpi above and the whole of the third joint fuscous (XLVI), mixed with whitish hairs; palpi at the sides, thorax and abdomen on under side, coxae of legs and hairs on tibiae of fore legs, femora and tibiae of mid and hind legs white; shaft of antennæ fuscous, mixed with whitish scales; branches sudan brown (III); abdomen fuscous-black (XLVI), narrowly ringed with white scales; anal tuft with fuscous and white hairs.

Fore wing: the greater part of the wing, but especially the anti-medial, medial, and beyond postmedial area thickly irrorated with mahogany-red (II) scales, mixed with whitish scales at basal and fuscous scales at terminal area; an elongate, rounded, white patch beyond the reniform, obliquely situated in the direction of a line from tornus to $\frac{1}{2}$ costa and extending in length from stalk of 8, 9, 10 to vein 2 and as broad, as from reniform to $\frac{1}{2}$ the distance of postmedial and sub-terminal lines; basal part with many whitish scales; sub-basal line broad, whitish, and from costa to vein 1b, angled at upper median; antimedial line thin,

whitish, waved inwards at cell and between lower median and vein 1*b*; medial line whitish, broad near costa, fainter beyond upper median, and parallel to antimedial, except at median fold, where it is more waved inwards; reniform fuscous, ringed with black; costa between medial and postmedial with many whitish-yellow scales; postmedial whitish-yellow, edged on outer side with mahogany-red, waved outwardly between vein 3 and 11, then a little inwardly at 2; in the whitish patch the veins are streaked with mahogany-red beyond postmedial line; a whitish-yellow streak from both ends of the patch towards costa and inner margin and parallel to postmedial line; sub-terminal line distinct, whitish-yellow, erect, and much waved inwardly at vein 2-3, 5, 7-8, and outwardly at veins 3-4, and 6 (in co-type, which is a little greasy, this line is less distinct); terminal line waved outwards at the veins, so as to leave fuscous lunules between the veins; cilia with a basal fawn-coloured (XL) line, checkered with fuscous and whitish.

Hind wing: ground colour sepia (XXIX), thickly irrorated with fuscous scales and covered on inner marginal area with long whitish hairs; an elongate whitish patch beyond cell, from vein 6 to a little beyond vein 3; this patch is sub-elliptical and indented on outer side at vein 5; cilia fuscous at first $\frac{1}{2}$, then fawn and whitish mixed.

Under side of both wings fuscous, with the patches clearly defined and on a pure white colour; fore wing with costa broadly scaled with maize-yellow (IV); basal area with white scales and hairs; hind wing with the inner marginal $\frac{1}{2}$ from costa to beyond tornus with white scales and hairs; a fuscous reniform at end of cell; outer marginal $\frac{1}{2}$ with some few white scales, giving it a white irroration; cilia of both wings as on upper side, except that they have a thin basal whitish line.

Exp. 27.4 mill.

Hab. Que-que, Rhodesia (Miss V. D. Crowder).

One ♂ type in coll., Tvl. Mus.

One ♂ co-type in coll., Janse.

This species is closely allied to *O. melanoleuca*, Hmps., from which it differs in the mahogany-red irroration, the distinctness of the lines in the fore wing (not mentioned at all by Hampson), and the hind wing being fuscous and not black. It may be, of course, that Hampson's specimen was very greasy, and that therefore the hind wings appeared black, as is the case with the hind wing of my co-type, and that the lines of the fore wings were for that reason also invisible, which certainly have a tendency to disappear with greasiness, but I hardly think that an observer like Hampson would have been thus misled.

My species also comes close to Hampson's *A. achrodisa*, from Katanga (Congo), but from this species it differs in the white patch of the hind wings.

Species *auctorum* :—

***Ornithopsyche melanoleuca*.**

Aroa melanoleuca, Hmps., Ann. S.A. Mus., p. 408 (1905).

I have no doubt that this species has to come in the genus *Ornithopsyche*.

MICRAROA (pl. VII, figs. 1, 2).

Micraroa, Hmps. n., Ann. S.A. Mus., p. 404 (1905); type *rufescens*.

Proboscis absent; palpi very short, drooping, and consisting of two joints only; first joint sub-conical, at base of second joint somewhat hollowed out, with long hair on under side (in *minima* this joint is more globular); second joint cylindrical, towards end thickened end obtusely rounded; length $1\frac{1}{2}$ length of first joint (in *minima* the second joint is more pear-shaped and somewhat pointed); second joint on under side and at end fringed with very long hair; eyes nearly rounded, rather small, less than width of frons; frons rounded and with a pointed tuft of hair; antennæ bipectinate, about $\frac{1}{2}$ length of costa and very much curved; basal joint of shaft with a pointed hair tuft; branches about 6 times thickness of shaft and ending in 2 long bristles; thorax and abdomen clothed with hair; abdomen $\frac{2}{3}$ of hind wing; fore legs with a thin, somewhat curved process, longer than the tibia; a long tuft of hair and a number of very short hairs on inner side of process; mid and hind tibiae with terminal spurs only; femora of all legs and tibiae of hind legs with rather long hair; the other tibiae and the tarsae of all legs with moderate hair.

Fore wing broadly triangular; costa and inner margin straight; termen, apex, and tornus much rounded; cilia rather long; *1b* simple at base; *1c* faintly represented at basal $\frac{1}{2}$, then stronger; 2 from $\frac{2}{3}$ lower median; 3 from beyond $\frac{2}{3}$ distance 2-4; 4 and 5 from lower angle; discocellular absent; 6 from upper angle; 7 absent (Hampson states that 9 is absent, but, judging by the position, I think it is 7 and not 9 that is absent); stalk of 8, 9, and 10 from upper angle; 8 ending at apex; 9 from $\frac{1}{2}$ of 8; 10 from $\frac{1}{4}$ of 9; 11 from upper median at $\frac{7}{8}$; 12 parallel to upper median and vein 11.

Hind wing broadly sub-triangular; costa somewhat and inner margin well rounded; termen slightly hollowed out from *1c* to vein 4; apex and tornus well rounded; *1a* long; *1b* to tornus; *1c* faintly represented; 2 from $\frac{2}{3}$ lower median; 4 and 5 from lower angle (Hampson states in his key that vein 3 is absent and in the description that $\bar{5}$ is absent; the latter, I think, is wrong); 6 and 7 on a long stalk (about $\frac{1}{3}$ of 6); 8 curved to upper median at $\frac{1}{3}$, then anastomosing with it for $\frac{1}{3}$, then to beyond $\frac{1}{2}$ of costa; cilia very long for this family; transverse vein absent.

Hampson mentions a recurrent vein in cell, but in both species this is very indistinct; I take it to be the median fold.

Using Prof. Aurivillius's "Key," one comes to the genus *Homoeomeria*, Wllgrn., but I am not certain whether these two genera are synonymic or not, as I do not know the type of *Homoeomeria*.

Species in South Africa:—

Micraroa rufescens, Hmps. n., Ann. S.A. Mus., p. 405 (1905).

Hab. Groenvlei, Transvaal (X, Janse).

New Hanover (IX, X, III, Hardenberg).

Durban (IX, Leigh).

Tongaat (Natal).

The specimens I take to belong to this species are smaller than 22 mill. My largest specimen is 19.5 mill. and the smallest 17 mill. The description

however, is too imperfect and the colour mentioned is too vaguely indicated to be certain about the correct specific identification; but I have little doubt that my identification is correct. My specimens are from cinnamon to clay colour (XXIX), with the costa, the outer margin, and most veins snuff-brown (XXIX).

Micraroa minima, nov. spec. (pl. VII, fig. 2; pl. III, fig. 17).

♂. Fore wing, palpi, head, shaft of antennæ, thorax and abdomen above and on under side, and legs ochraceous-buff (XV); branches of antennæ black; hind wing ochraceous-orange (XV); fore wing and hind wing covered with very long hair; cilia as long as in *rufescens*.

Exp. 13.3 mill.

Hab. Colenso (Natal) (8.3.02, Janse); two specimens.

Type and co-type in coll., Janse.

The colour and size, and even the shape of the palpi differentiate this species at once from *M. rufescens*.

HOMOCHIRA (pl. VII, fig. 2).

Homochira, Hmps., Ann. S.A. Mus., p. 409 (1905); type *rendalli*.

♂. Proboscis absent; palpi moderate, well beyond frons, clothed with thick hair beneath; first joint a little longer than broad; second joint $2\frac{1}{2}$ times longer than first joint, a little thicker towards end and there rounded; third joint as long as first joint, drooping; eyes rounded, large, about width of frons; frons rounded and covered with thick moderate hair; antennæ as long as $\frac{1}{2}$ costa of wing, bipectinate; branches 6 times shaft, ending in 2 bristles (not in one bristle, as stated in the original description); thorax clothed with rather long hair; abdomen with a tuft on first three segments, first tuft smaller than the others or even absent; legs covered with thick hair; fore legs very hairy, even on the tarsæ; process a little shorter than the tibiae, thick, and somewhat curved at tip, as in *Euproctis*; mid tibiae with 2, hind tibiae with 4, spurs.

Fore wings rather short and broad; costa gently arched; termen erect, evenly rounded; inner margin slightly arched; apex and tornus much rounded; 1a faintly present; 2 from $\frac{3}{4}$ lower median; 3 from $\frac{4}{5}$ 2 to 4; 4 from lower angle; 5 at same distance from 4 as 3 to 4; discocellular well represented, rounded inwards; cell very short, about $\frac{1}{2}$ of wing; 6 at the same distance from 7 as 5 is from 4; stalk of 7, 8, 9, 10 from the upper angle; 7 from stalk at nearly $\frac{1}{3}$ of 8; 9 from 8 a little beyond $\frac{2}{3}$ of 8; 10 from a little before $\frac{2}{3}$ of 8; 11 from $\frac{3}{4}$ upper median, parallel to 12; 12 for a long distance parallel to costa.

Hind wing semicircular; costa slightly arched; termen and inner margin much rounded; apex rounded; tornus with a slight lobe at 1b; 1a moderate; 2 from beyond $\frac{3}{4}$ lower median; 3 and 4 slightly stalked and from lower angle; 5 from well above the angle; discocellular rather faint, angled inwards at middle; cell much less than $\frac{1}{2}$ of wing; 6 and 7 from upper angle and on a stalk of $\frac{1}{6}$ of 6; 8 approximating and just touching upper median at $\frac{1}{2}$, but not anastomosing with it.

This genus is so close to the genus *Euproctis* that it may not be quite distinct. The tufts on the dorsum, the more stout process of fore legs, and the more hairiness generally seem to be the only distinctive characters. I take it that this genus is intermediate to *Ornithopsyche* and *Euproctis*.

Species in South Africa :—

Homochira rendalli, Dist., A. M. N. H. (6), XX, p. 203 (1897).

Hmps. n., Ann. S.A. Mus., p. 410 (1905).

Hab. Waterval (Zoutpansberg District) (XII, Janse).

Rooiplaat (III, Swierstra).

Pretoria (I, Janse).

Bultfontein (I, Janse).

Waterval Onder (XI, Janse).

Three Sisters (II, III, Janse).

Durban (X, Clark).

Umkomaas (I, Janse).

Only ♂♂ of this species are known to me.

EUPROCTIS (pl. VII, figs. 3, 5, 6).

Euproctis, Hübn., Verz., p. 159 (1827); type *chryssorrhæa*.

Dulichia, Wlk., IV, p. 809 (1855).

Lopera, Wlk., IV, p. 919 (1855).

Hmps. n., Ann. S.A. Mus., p. 406 (1905).

Description made from *E. fasciata*.

♂. Proboscis absent or very rudimentary; palpi porrect, just reaching frons; first joint conical with the point curved upwards, nearly 2 times longer than thick; second joint cylindrical, as thick as first joint, but 3 times longer than thick; third joint a little shorter than first joint, thin and bluntly pointed, hidden in hair; all joints with a little hair above and much long hair on under side (in ♀ the palpi are a little ascending; second joint longer and thinner, about 3 times first joint; third joint as long as $\frac{1}{2}$ second joint and thinner; the whole palpus less hairy); eyes rather large, over width of frons, rounded; frons rounded and with short hair; antennæ nearly $\frac{1}{2}$ of costa (in ♀ only $\frac{1}{4}$ of costa), curved, bipectinate; in ♂ the pecten are 6 to 8 times shaft, ending in a long bristle; in ♀ only 3 times shaft; vertex and thorax covered with moderately long hair; abdomen longer than hind wings, covered dorsally with short hairs and ventrally with longer hairs, ending in a long hairy tuft in ♂ and becoming truncate in ♀; on dorsum a tuft of hair on first and second segments; legs very hairy on femora, tibiae, and tarsae; fore legs with a process as long as or a little longer than tibiae, curved somewhat like an S terminally, and pointed; in ♀ a little shorter and thicker; mid tibiae with 2 spurs; hind tibiae with 4 spurs.

Fore wing long, sub-triangular; costa and outer margin somewhat rounded; inner margin well rounded; apex and tornus rounded; 1b simple at base; 2 from beyond $\frac{2}{3}$ lower median; 3 from well before angle; 4 and 5 from lower median; 6 from just beyond upper angle; stalk of 7, 8, 9, 10 from upper angle; 7 from beyond $\frac{1}{4}$ of vein 8; 9 from $\frac{2}{3}$ of 8; 10 from $\frac{1}{2}$ of vein 8; 11 from $\frac{4}{5}$ upper median; 12 somewhat parallel to upper median.

Hind wing triangular; costa, outer and inner margin somewhat rounded; apex and tornus well rounded; *1a* long, straight; *1b* nearly straight; 2 from $\frac{3}{4}$ lower median; 3 and 4 on a short stalk from lower angle; 5 from above this angle; 6 and 7 on a stalk of $\frac{1}{6}$ of vein 6 and from upper angle; 8 bent to beyond $\frac{1}{2}$ upper median, where that vein is angled upwards, so as just to touch it, but not anastomosing with it, then curved at end.

The venation, the palpi, and the process of the fore legs vary a little in the different species and will be mentioned under each respective species.

Key to South African species:—

1. *a.* Fore wing with the anti- and post-medial lines darker than the ground colour..... 2.
- b.* Fore wing with the anti- and post-medial lines lighter than the ground colour or absent..... 6.
2. *a.* Fore wing pale brown (grey ?); costal area suffused with white..... **aspersa*.
- b.* Fore wing orange to white..... 3.
3. *a.* Fore wing with a red discoidal spot..... **sanquigutta*.
- b.* Fore wing without a red discoidal spot..... 4.
4. *a.* Fore wing with the basal area irrorated with rough black scales..... **squamosa*.
- b.* Fore wing with the basal area not irrorated with black scales..... 5.
5. *a.* Fore wing with the anti- and post-medial lines orange-buff (III); ground colour of fore wing baryta-yellow (IV)..... *fasciata*.
- b.* Fore wing with ground colour white; anti- and post-medial lines pinard-yellow (IV) and interrupted or absent; red marks near apex and tornus.... *rufopunctata*.
6. *a.* Fore wing with the anti- and post-medial lines lighter than the ground colour, but present.... 7.
- b.* Fore wing with the anti- and post-medial lines absent..... 10.
7. *a.* Fore wing ochraceous-orange (XV); black scales in end of cell and from lower angle to inner margin between the antimedial and postmedial lines.... *punctifera*.
- b.* Fore wing more yellow..... 8.
8. *a.* Fore wing with some red scales at the end of the cell to represent the reniform..... 9.
- b.* No red scales in fore wing at end of cell..... **mesozona*.
9. *a.* Fore wing colonial buff (XXX); hind wing straw-yellow (XVI); fascia from reniform to inner margin usually faintly developed or not at all.... *pallida*.
- b.* Fore wing baryta-yellow; hind wing orange-buff (III); fascia well developed..... *bicolor*.
10. *a.* Abdomen with the last segments darkly coloured.. *terminalis*.
- b.* Abdomen with the last segments not darker..... 11.

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| 11. a. Fore wing with orange-red scales at end of cell..... | 12. |
| b. Fore wing without orange-red scales at end of cell;
wings cartridge-buff (XXX)..... | <i>flavicincta.</i> |
| 12. a. Ground colour of fore wing white or yellowish-white. | 13. |
| b. Fore wing yellow or orange-yellow..... | 14. |
| 13. a. Fore wing with red marks near tornus only..... | <i>haemodetes.</i> |
| b. Fore wing with red marks near apex and tornus... | <i>rufopunctata.</i> |
| 14. a. Fore wing light cadmium (IV); hind wing deep
chrome (III)..... | <i>iridescens.</i> |
| b. Fore wing and hind wing apricot-yellow (IV); fore
wing with two small sub-terminal patches of dark
scales..... | <i>crocata.</i> |
| c. Fore wing baryta-yellow..... | 15. |
| 15. a. Some sub-terminal dark scales in fore wing..... | 16. |
| b. Fore wing without dark sub-terminal scales..... | <i>straminicolor.</i> |
| 16. a. The dark scales are well defined and found between
all the veins of the fore wing; median fascia con-
sisting of black scales only..... | <i>nigripuncta.</i> |
| b. The dark scales are ill-defined and a few only in each
patch; median fascia made of red scales, mixed
with a few black scales..... | <i>stellata.</i> |

Species in South Africa :—

Euproctis terminalis, Wlk., IV, p. 794 (1855).

Hmps., Ann. S.A. Mus., p. 407 (1905).

Hab. Cape Colony.

In this species the palpi have the second joint only 2 times as long as the first joint and the process is more slender and a little longer than in *E. fasciata*.

Euproctis punctifera, Wlk., IV, p. 792 (1855).

Hypogymna melanura, Wllgrn., Wien. Ent. Mon., IV, p. 163 (1860).

Laupera gaudens, Wlk., XXXII, p. 357 (1865).

Hmps., Ann. S.A. Mus., p. 407 (1905).

Hab. Durban (XII, I, Leigh).

Sarnia (I, Janse).

Umkomaas (I, Janse).

Duff's Road, Natal (XII).

Tongaat (Natal).

In this species the fore wing has 11 from $\frac{3}{4}$; the hind wing has the stalk of 3 and 4 longer, as much as $\frac{1}{3}$; in the palpi the second joint is only 2 times first joint; the process of the fore legs is a little thicker.

Euproctis iridescens, nov. spec. (pl. III, fig. 18; pl. VII, fig. 6).

♂. Head and thorax above and ground colour of fore wing light cadmium (IV); hairs of frons, antennæ, palpi, thorax on under side, abdomen, hind wing, and both wings on under side deep chrome (III);

long hairs of legs and cilia of hind wings light cadmium; medial and post-medial lines very indistinctly represented by apricot-yellow (IV), or totally absent; reniform orange-chrome (II), edged on inner and outer side by some black scales; from reniform towards $\frac{1}{2}$ of inner margin a band of same width over the whole length, but interrupted between reniform and vein 3, faint at space between 2 and 3, broken at vein 2 and consisting of orange-chrome scales, edged on both sides and mixed all over with black scales (in ♂ co-type this band is narrower and mainly consists of black scales, mixed with a few orange-chrome scales); a sub-terminal line represented by a few black or sometimes also by a few orange-chrome scales at between veins 8-7, 7-6, 6-5, and before vein 2.

Hind wing and under side without markings.

♀ like ♂, but anal tuft with tawny-olive (XXIX) hairs.

Exp. ♂ type, 31·8 mill.; ♀ type, 36·3 mill.

Hab. ♂ ♀ types and ♂ co-type from Waterval Onder (15.12.10, Janse), bred from larva No. 9 feeding on *Combretum* spec.

Also one ♂ in fair preservation from Estcourt (Natal) by J. M. Hutchinson (in 1894-95), which is in the Pietermaritzburg Mus.

Types and co-type in coll., Janse.

This species is closely allied to *E. crocata*, but differs from it in several characters; the process of the fore leg is in the ♂ of *iridescens* less curved (my ♀ *iridescens* has the fore legs lost, so I cannot compare these with *crocata*); the palpi differ in having the second joint a little shorter and thicker and the third joint is only of $\frac{1}{2}$ the length of that of *crocata*; the fore and hind wings have not the same colour as is the case in all *crocata* I have seen; the under side is much darker and the medial band is absent.

Euproctis crocata, Boisd., Voy. Delegorgue, II, p. 599 (1847).

Herr Schäff., Aussereur. Schmett. (fig. 112).

Hypogymna cateja, Wllgrn., Wien. Ent. Mon., IV, p. 163 (1860).

Hmps., Ann. S.A. Mus., p. 407 (1905).

Hab. Woodbush Village (XII, Swierstra).

Barberton (I, Janse).

New Hanover (XII, Hardenberg).

Durban (III, Leigh; Clark).

Umkomaas (I, Janse).

Capetown (IV, Lord Gladstone).

The palpi of this species are as in *fasciata*, but the second joint is a little thinner; the process of the ♂ fore tibia is a little longer and the curved end is larger and more rounded; in the ♀ this process is very thin and short.

Euproctis fasciata, Wlk., IV, p. 809 (1855).

Artaxa squamiplaga, Wlk., Proc. Nat. Hist. Soc., Glasg., I, p. 338 (1869).

Euproctis susanna, Stgr., Iris., VII, p. 258 (pl. IX, fig. 9) (1894).

Euproctis torrida, Dist., A. M. N. H. (6), XX, p. 202 (1897).

Hmps. n., Ann. S.A. Mus., p. 407 (1905).

- Hab. Shilouvane (X, Rev. Junod).
 Pretoria (I, Swierstra).
 White River (I, Cooke).
 Three Sisters (II, Mrs. Snooke).
 Barberton (I, II, Janse).
 New Hanover (II, Hardeberg).
 Pietermaritzburg (IX).
 Sarnia (I, II, Janse).
 Tongaat (Natal).
 Durban (X, XII, Janse).
 Umkomaas (I, Janse).
 Ngqeleni (I, XI, Swinny).

Euproctis nigripuncta, nov. spec. (pl. III, fig. 19).

♀. Head, shaft and branches of antennæ, thorax, base of abdomen, the long hair on legs, anterior and posterior wings above and on under side baryta-yellow (IV); palpi, short hairs of legs and abdomen buff-yellow (IV); anal tuft Prout's brown (XV); anterior wing with capucine-yellow (III) rounded reniform, surrounded by some blackish scales, mostly on inner side (in the co-type the reniform is much reduced); a black fascia just under reniform, consisting of black scales and interrupted at vein 2, 1b, and at medial fold, so as to form four groups; a sub-terminal series of black spots from 1b to 9; spots between 7 and 8 placed nearer to termen and the next spot more inwards, to form an angle; from there all spots form an evenly curved line inwards, except the spot between 2 and 1b, which is directed towards tornus and broken into two by the medial fold; no markings on under side. The ♀ co-type is a rather bleached specimen and has only the spots between 5 and 6 and between medial fold and 2 present; the fascia is also much less developed.

Hind wing on upper and under sides without any markings.

Exp. Type, 32.2 mill.; co-type, 29.1 mill.

Hab. Type from Pretoria (3.12.13, Janse); in coll., Janse.

Co-type from Pretoria (Munro); in coll., Tvl. Mus.

This species comes close to *straminicolor*, but can easily be distinguished from it by fore and hind wings being of the same colour, by the stronger developed fascia, the sub-terminal series of black spots, and the reniform being surrounded by black scales.

Euproctis haemodetes, Hmps. n., Ann. S.A. Mus., p. 408 (1905).

Hab. Ngqeleni (II, Swinny); in coll., Tvl. Mus.

Euproctis rufopuncta, Wlk., Trans. Ent. Soc. (3), p. 265 (1862).

Hab. Noordkaap (Barberton District) (Jeffery).

Durban (IX, XI, Leigh; Quekett) (XII).

Fore wing with vein 10 more close to 9; hind wing with 3 and 4, 6 and 7 from a point; 8 not quite touching upper median, but connected

with it by a bar ; process of fore legs in ♂ shorter, thicker, and a little less curved at base ; in ♀ the process is as in the ♂ ; palpi in ♂ and ♀ with third joint a little longer than in *fasciata*.

Euproctis straminicolor, nov. spec. (pl. III, fig. 20).

♀. Head, palpi, shaft of antennæ, thorax, legs and ground colour of fore wing straw-yellow (XVI) ; branches of antennæ ochraceous-orange (XV) ; abdomen, hind wings above, and both wings on under side amber-yellow (XVI) ; anal tuft cinnamon-brown (XV) ; fore wing with very faint indistinct light medial, postmedial, and sub-terminal lines ; a cadmium-orange (III) rounded orbicular, with an indication of dark scales on inner side ; a faint fascia of scattered amber-brown (III) scales, mixed with a few orange (III) scales (the co-type from Pretoria has three or four darker coloured scales between vein 5 and 6, forming a rudimentary sub-terminal spot, such as is fully developed in *nigripuncta*) ; hind wings without any markings ; cilia of both wings straw-yellow ; under side of both wings without any marking.

Exp. 33·6 mill.

Hab. Type and one co-type from Waterval, Zoutpansberg District (27-29.12.99, bred by Janse ; larva feeding on a species of acacia).

One co-type in coll., Tvl. Mus., from Pretoria (Jan., 1898, Swierstra).

Palpi as in *bicolor* ; process of fore tibia very short ($\frac{1}{2}$ of tibia), thin, straight, and pointed ; venation as in *fasciata*, except that the fore wing has 3, 4, and 5 more apart ; hind wing with 3, 4 from a point or on a very short stalk ; 5 more apart from 4 than in *fasciata*.

It is possible that this is the ♀ of *Euproctis bicolor*, but the colour is so different that I think it better to look for the present upon it as a distinct species till later on more breeding gives better views.

I consider this species to be closely allied to *crocata* (judging from the meagre description), but it is much smaller and has no fascia.

Euproctis bicolor, nov. spec. (pl. III, fig. 21 ; pl. VII, fig. 5).

♂. Palpi, frons, thorax, abdomen on under side, hairs on legs, and ground colour of fore wings maize-yellow (IV) ; head, thorax, basal part of abdomen above, and shaft of antennæ buff-yellow (III) ; branches of antennæ raw sienna (III) ; further part of abdomen above light orange-yellow (III) ; ground colour of hind wing deep chrome (III).

Fore wing with the antimedial part tinged with apricot-yellow (IV) ; medial, postmedial, sub-terminal, and terminal lines apricot-yellow ; medial line evenly rounded ; postmedial broad near costa, rounded at veins 3, 4, 5, then slightly incurved ; sub-terminal broad at costal $\frac{1}{2}$ and parallel to postmedial ; terminal angled inwards at veins ; space between medial and postmedial lines filled with black and orange-chrome (II) scales from lower median till inner margin, so as to form a fascia ; orbicular rounded, orange-chrome, and with a few black scales ; cilia apricot-yellow.

Hind wings without markings ; cilia light orange-yellow.

Under side of both wings deep chrome, except cilia, which are as on upper side.

Exp. ♂ type, 29·2 mill (in coll., Janse).

♂ co-type, 25·2 mill. (in coll., Tvl. Mus.).

Hab. Tweefontein (13.1.07, Janse).

Zandfontein (Dec., 1911, J. v. Niekerk).

This species comes close to *sanguigutta*, Hmps., I think, but can be distinguished from it by the colour of both wings and the fascia of the fore wing.

The process of fore leg is less curved, much thicker, and more bluntly rounded than in *fasciata*. The palpi are smaller than in the other species; the second joint has the same proportion as in *fasciata*, but is more conical; the third joint is in a line with the second joint and slightly shorter.

Euproctis pallida, Kirby, A. M. N. H. (6), XVIII, p. 384 (pl. XIX, fig. 6), (1896).

Swinhoe, Trans. Ent. Soc., Lond., p. 410 (1903).

Hab. Waterval Onder (XII, Ross).

White River (XII, Cooke).

Barberton (I, Janse).

Sarnia (I, II, III, VIII, XII, Janse; Leigh).

Durban (IX, XII, Clark; Janse).

Umkomaas (I, Janse).

Tongaat (Natal).

Eshowe (Zululand) (XI).

Estcourt (Natal).

This species was omitted by Hampson in his "South African Moths," and following the key in that work my specimens would have to be identified as *stellata*, Dist. Distant's description fits my specimens fairly well, but is too vague to give certainty. My largest specimen, however (a ♀), is only 34·7 mill., and the majority are much smaller. I doubt that this rather small moth will ever be as big as 44 mill., as Hampson gives in his list for *stellata*. Swinhoe, *l.c.* p. 410, places *stellata* as a synonym of *fasciata*, which I think is wrong in any case. At any rate, all specimens I have seen are distinct from *fasciata*, though they occur in the same locality. Kirby's description and figure of *pallida* fit my specimens very well, and I have little doubt that my identification is correct, and that *stellata* is another distinct species.

The fore wing has vein 11 from $\frac{2}{3}$ upper median and 3, 4, 5 a little farther apart than in *fasciata*; the hind wing has 6 and 7 on a little longer stalk and 5 is rather farther apart from the stalk of 3 and 4; the palpi of the ♂ have the third joint shorter and in a line with joint 2; in the ♀ the palpi are shorter, especially the third joint; in ♀ the process of fore tibia is absent.

Euproctis stellata, Dist., A. M. N. H. (6), XX, p. 202 (1897).

Hmps., Ann. S.A. Mus., p. 408 (1905).

I have seen a ♂ belonging to Mr. Clark and identified by A. T. Cooke in the British Museum as *E. stellata*, and I have a specimen in my own

collection identical to it. These two specimens correspond well to the description of Distant, but he does not mention that the fascia is mainly composed of orange scales with a few black scales in it; this is very distinct in the two specimens mentioned, though the fascia is made of black scales with a few orange scales in it in a specimen somewhat discoloured, but that I think to be identical to the other two.

Hab. Durban (Clark).

Pietermaritzburg (Jan., 1909).

Euproctis flavicincta, nov. spec. (pl. III, fig. 27).

♀. Vertex of head, shaft of antennæ, patagia, hairs on thorax above and below, ground colour of wings above, mid and hind legs, and abdomen on under side cartridge-buff (XXX); branches of antennæ ochraceous-tawny (XV); frons, palpi, costa of fore wing on upper and under side, and hairs on fore tibia buff-yellow (IV); tegulae light orange-yellow (III); abdomen buff-yellow, mixed with antimony-yellow (XV) hairs; anal tuft of antimony-yellow hairs on outer side and cinnamon-brown (XV) hairs towards outer side.

Fore wing thinly irrorated on the veins, near costa, on inner and outer margin with maize-yellow (IV) scales; from near lower angle of cell towards apex, as far as vein 6, a faint line made of avellaneous (XL) tipped scales; cilia of ground colour.

Hind wing very thinly irrorated towards outer margin with maize-yellow scales; cilia of same colour.

Under side of fore wing cartridge-buff, thickly irrorated with light drab (XLVI) scales; cilia maize-yellow; hind wing whitish, thinly suffused on costa and outer margin with maize-yellow; cilia maize-yellow.

Exp. 30·2 mill.; one specimen only.

Hab. Pretoria (Dr. H. G. Breyer); in coll., Tvl. Mus.

Hind wing with stalk of 6 and 7 very long, about $\frac{1}{2}$ length of 6; the shape of the fore wing is very peculiar for a *Euproctis* and resembles more the ♀ of a *Lacipa*, being very long and narrow and with the termen very oblique, but it undoubtedly comes in *Euproctis*.

Species auctorum:—

Euproctis aspersa, Feld.

Euproctis squamosa, Wlk.

Euproctis mesozona, Hmps.

Euproctis sanguigutta, Hmps.

Euproctis crocosticta, Hmps.

Euproctis haemodetes, Hmps.

Species omitted:—

Euproctis monosticta, Butl., as it is a *Pteredoa* and not an *Euproctis*.

PORTHESIA (pl. VII, fig. 4).

Pothesia, Steph., Brit. Ent. Haust., II, p. 65 (1829); type *auriflua*, Hübn. Hmps., "Moths of India," Vol. I, p. 484.

Description made from *P. natalensis*, nov. spec.

Proboscis absent; palpi porrect, rather long, reaching well beyond frons and covered with short hairs; in ♂ first joint a little longer than

broad; second joint 2 times first joint in length and a little thinner; third joint over $\frac{1}{2}$ of second joint, pointed and not hidden in the hairs; in ♀ the second joint is 3 times length of first joint; third joint nearly $\frac{2}{3}$ of second joint; eyes almost rounded, as large as width of frons; frons rounded and covered with short hairs; antennæ nearly $\frac{1}{2}$ length of costa, curved, bipectinate, branches forming on under side nearly a straight line; branches short, only 4 times thickness of shaft and ending in 2 bristles; thorax clothed with long woolly hair; abdomen with two crests on basal segment and a crest on second and third segments, crests composed of rather long woolly hair; legs moderately clothed with long hair; fore tibia of ♂ with a much curved process, as long as tibia; in ♀ the process is much thinner and nearly straight; mid leg with 2 and hind leg with 4 long spurs.

Fore wing sub-triangular; costa and inner margin straight; termen much rounded; 1*b* simple at base; 2 from $\frac{2}{3}$ lower median; 3 from just beyond $\frac{3}{4}$ the distance 2 to 4; 4 from lower angle; 5 from just above the angle; discocellular angled beyond middle; cell about $\frac{1}{2}$ of wing; 6 from below upper angle; stalk of 7, 8, 9, 10 from angle; stalk of 7, 8 as long as $\frac{2}{3}$ of 7; 9 from nearly $\frac{2}{3}$ of 8; 10 from before $\frac{1}{3}$ of 8; 11 from near upper angle; 12 parallel to costa.

Hind wing semicircular; costa and inner margin straight; termen much rounded; apex much rounded; tornus with a rounded lobe at from before 1*b* till 2; 1*a* short, straight; 1*b* somewhat curved; 1*c* faintly represented; 2 from $\frac{1}{5}$ lower median; 3 and 5 from lower angle; 4 absent (Aurivillius and Hampson state that 5 is absent; Meyrick takes 4 to be the absent vein, and judging from the position of the two other veins I think the latter is correct; most probably 4 and 5 have united so as to form one vein only); discocellular rounded inwards; cell less than $\frac{1}{2}$ of wing; 6 and 7 on a stalk of $\frac{1}{4}$ of 6 and from the upper angle; 8 much curved near base, then anastomosing with the upper median at $\frac{2}{3}$, where upper median is much curved, then to costa and for a little distance parallel with it.

This genus is most certainly allied to *Euproctis*, from which it has most probably developed.

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| 1. <i>a.</i> Hind wing white..... | <i>sub-alba.</i> |
| <i>b.</i> Hind wing yellow..... | 2. |
| 2. <i>a.</i> Fore wing of ♂ with the space between antimedial and postmedial lines partly filled with dark scales; hind wing cream colour (XVI)..... | <i>natalensis.</i> |
| <i>b.</i> Fore wing of the ♂ with the antimedial and postmedial lines represented only by some dark scales; hind wings pale orange-yellow (III)..... | <i>hardenbergia.</i> |

Species in South Africa :—

Porthesia natalensis, nov. spec. (pl. III, 22, 23).

♂. Head, palpi, antennæ, tegulæ and fore legs apricot yellow (IV); thorax above with sorghum brown (XXXIX) hairs; abdomen with the dorsal crests and hairs of anal segment of apricot yellow hairs; abdomen

clothed above and on underside with shorter hairs of same colour; mid and hind legs with long cream coloured (XVI) hairs; wings of cream colour (XVI) above and on underside, fore wing on upper side thickly irrorated with apricot yellow scales, especially at costa, on the veins and at inner margin; hind wing above slightly coloured near inner margin with warm buff (XV).

Fore wing at medial space a fascia from upper median till inner margin, and somewhat narrower towards costa; a broad postmedial band of same colour from near costa, parallel to outer margin and joining medial fascia at vein 2 and extended till inner margin; this fascia is angled outwards between vein 1*b* and 2, 3 and 4, 6 and 7, and inwards between vein 5 and 6, 2 and 3; the scales of these fascia are at some parts entirely pale vinaceous-fawn (XL), at other parts tipped with fawn colour (XL), and many scales are tipped with army brown (XL) or even black, so that the fascia look to the naked eye fawn coloured sprinkled with black.

Hind wing without any markings; cilia of ground colour in both wings.

Under side cream colour, tinged with buff-yellow; in fore wing the costa has a sorghum-brown edge for its first half and the fascia are indicated by a darker shading than the ground colour.

♀. Head, palpi, antennæ, tegulae, patagia, thorax, hairs on legs apricot-yellow; anterior $\frac{1}{2}$ of abdomen light buff (XV), clothed with long apricot-yellow hairs; posterior $\frac{1}{2}$ and under side covered with light orange-yellow (III) hairs; anal tuft with raw umber (III) hairs.

Wings as in ♂, but without the fasciae; fore wing with three black markings at sub-terminal area (the remains of the postmedial fascia of ♂), consisting of large black scales dotted over the area and mixed with some orange-buff (III) scales; first mark between vein 6 and 7; second mark triangular and between vein 3 and 4; third mark above and below vein 1*b*; some long orange-buff scales and hairs on inner margin, mixed with a few black scales near last terminal mark (in one wing a few black scales just above 1*b* antimedially).

Hind wing without any markings; cilia cream coloured.

Under side of a cream colour, tinged with buff-yellow (IV) near margins in fore wing and inner marginal area of hind wing.

The palpi in this species are oblique, with the terminal joint correct, longer in the ♀ than in the ♂.

Exp. ♂ type, 21.5 mill.; ♂ co-types, 23.7 mill.; two large ♂♂ (badly worn), 28.2 mill.

♀ type, 31 mill.; co-types, 28.2-34.3 mill.

Ten specimens.

Hab. ♂ type, Durban (24.2.09, Leigh); in coll., Tvl. Mus. ²⁸
Co-types, Durban (14.9.07, 12.8.07, Leigh); in coll., Tvl. Mus. and my own.

Also two ♂♂ (badly worn) from Estcourt, Natal (Hutchinson); in coll., Maritzburg Mus. and my own.

♀ type, Umkomaas (15.1.14, Janse); in my own coll.

Co-types, Durban (26.2.09, 11.1.11, Leigh)

Pinetown (14.2.10, Leigh); in coll., Tvl. Mus.

Porthesia hardenbergia, nov. spec. (pl. III, fig. 24).

♂. Head, palpi, tegulae, patagia, crest on abdomen, anal tuft, and inner s.de of fore legs cadmium-yellow (III); shaft of antennæ, ground colour of hind wings, thorax and abdomen on under side, fore legs on outer side, and hairs on the other legs pale orange-yellow (III); branches of antennæ warm buff (XV).

Fore wing with ground colour apricot-yellow (IV), here and there irrorated with cadmium-yellow hairs and scales; an antimedial fascia from inner margin to lower median and pointed towards that vein, it consists of orange (III) scales, of which some are tipped with blackish; a sub-terminal fascia beginning near tornus and there rather broad, parallel to medial fascia as far as vein 3, where it is narrow and indistinct, then as a faint line directed towards apex, but stopping at vein 5; this fascia is also made of orange and blackish scales, which get fewer beyond vein 2; cilia of ground colour.

Hind wing without any markings, but thickly covered with light orange-yellow (III) hairs and scales; cilia of ground colour.

Under side of both wings pale orange-yellow, with the fore wing on costa for $\frac{1}{2}$ its length broadly streaked with blackish hairs and scales.

Exp. 25 mill. One specimen only, which is in coll., Janse.

Hab. Clan Syndicate, Natal (27.9.13, Hardenberg; bred from wattle).

In this species the veins 3 and 5 of hind wing are on a stalk of $\frac{1}{4}$ 3.

Porthesia sub-alba, nov. spec. (pl. III, fig. 25).

♀. Head, palpi, shaft of antennæ, hairs on thorax, and ground colour of fore wings marquerite-yellow (XXX); branches of antennæ light ochraceous-buff (XV); hairs on first three segments above and on under side, hind wings above, thorax and both wings on under side and hairs on legs pure white; hairs on other segment of abdomen pale orange-yellow (III); anal tuft light drab (XLVI).

Fore wing with a faint indication of a white antimedial line as far as lower median vein; a more distinct postmedial white line from inner margin to vein 4, fringed on outer side by a few apricot-yellow (IV) scales; cilia of both wings of the ground colour of its wing.

Hind wing without any markings.

Exp. 29.5 mill.

Hab. ♀ type from New Hanover (March, 1913, Hardenberg); in coll., Janse.

Co-type, Port St. Johns (May, 1909, Swinny); in coll., Tvl. Mus.

This species is structurally typical, except that vein 11 is farther away from the stalk of 7, 8, 9, 10.

NAROMA (pl. VIII, fig. 1).

Naroma, Wlk., Cat. VII, p. 1744 (1856); type *signifera*.

Hysibada, Wlk., XXXII, p. 497 (1865); type *signifera*.

Zarfa, Wlk., Proc. Nat. Hist. Soc., Glasg., I, p. 338 (1869); type *signifera*.

Woerdenia, Snell., Tijd. v. Ent. (2), VII, p. 40 (1872); type *signifera*.
Hmps. n., Ann. S.A. Mus., p. 411 (1905).

♂. Proboscis very short; palpi a little beyond frons, moderately hairy, slightly ascending; first joint rather large; second joint less than 2 times first joint; third joint less than $\frac{1}{2}$ first joint and a little hairy above; eyes rather large, almost width of frons, round; frons rounded and with short thick hair; antennæ short, less than $\frac{1}{2}$ of costa, bipectinate, curved downwards and at tip again upwards; branches about 6 times shaft, getting suddenly shorter at apex, ending each in 2 long bristles, except last $\frac{1}{2}$, which ends in 1 long and 1 very short bristle; basal joint of shaft with a long thick tuft of hairs; in ♀ the branches are shorter, especially beyond $\frac{2}{3}$, and all branches have 1 long and 1 short bristle.

Thorax and abdomen with very thick hair; no distinct crests; legs very hairy on femora and tibiae, especially the hind legs; fore tibia with the process nearly as long as the tibia, not flat (as is the case in all other *Lymantriadae* I have studied), but peculiarly twisted, especially towards the outside; mid and hind tibiae with 2 spurs only.

Fore wing semicircular; costa straight; termen and inner margin well rounded; termen somewhat crenulate; apex and tornus much rounded; 1*b* much curved; 2 from $\frac{2}{3}$ of lower median; 3 from beyond $\frac{1}{2}$ distance 2 to 4; 4 from lower angle; 5 from near lower angle; cell over $\frac{1}{2}$ of wing; discocellular distinct, angled at middle; 6 from upper angle; stalk of 7, 8, 9 from near upper angle; 7 from beyond $\frac{1}{2}$ stalk of 8 and 9; 9 from $\frac{1}{2}$ free part of 8; 10 from upper median beyond $\frac{1}{2}$ distance of 11 to stalk of 7, 8, 9, and parallel to this stalk; 11 from $\frac{3}{4}$ upper median, parallel to 10; 12 very near to costa.

Hind wing sub-triangular; costa and termen rounded; inner margin straight; termen somewhat crenulate; apex and tornus much rounded; 1*a* long; 1*b* curved; 2 from $\frac{2}{3}$ lower median; 3 from beyond $\frac{2}{3}$ distance 2 to 4; 4 from lower angle; 5 from a little above the angle; cell over $\frac{1}{2}$ of wing; discocellular somewhat oblique, angled at beyond $\frac{1}{2}$; 6 and 7 from upper angle; 8 much curved to beyond $\frac{1}{3}$ upper median, which it touches for some distance, but without a bar, then it becomes parallel to 7.

Only one species is known in this genus, distributed all over Africa. I have seen specimens from:—

- Noordkaap (I, Janse).
- Groenvlei (I, Janse).
- Barberton (I, Janse).
- White River (II, Cooke).
- Durban (VIII, Leigh).
- Port St. Johns (II, Swinny).

This species I only found in places with dense vegetation, where it rests exposed on the upper side of leaves, with the wings only partly closed. In that position it resembles a white feather very much.

PTEREOA (pl. VIII, fig. 2).

*Ptereo*a, Hmps. n., Ann. S.A. Mus., p. 411 (1905); type *plumosa*.

Description made from *monosticta*, Butl.

♂. Proboscis minute; palpi short, hardly till frons, porrect, fringed with hair on under side; first and second joints of equal length; third

joint only $\frac{1}{2}$ of second joint; eyes large, over width of frons, rounded; frons rounded and covered with moderate hair; antennæ less than $\frac{1}{2}$ of costa, curved evenly downwards and then upwards at tip, bipectinate; branches moderate, about 6 times shaft, each ending in a long bristle; the branches get suddenly shorter towards tip; in ♀ the antennæ are only $\frac{1}{3}$ of costa, the branches are 3-4 times shaft, and the bristle is very short; in both sexes the basal joint of the antennæ has a moderate tuft of hair; abdomen moderately covered with hair and without crests; legs with scales and hairs; fore legs with the process a little longer than the tibia, somewhat twisted, broad, and with a curved point; in the ♀ the process is shorter and very thin; mid and hind tibiae with the 2 terminal spurs only, which are of equal length.

Fore wing sub-triangular, in ♀ semicircular; costa slightly arched; termen and inner margin well rounded; tornus much rounded; 1*b* simple at base; 2 from $\frac{2}{3}$ lower median; 3 from $\frac{3}{4}$ 2 to 4; 4 from lower angle; 5 from 4 as far as 4 from 3; discocellular faint; cell a little longer than $\frac{1}{2}$ the wing; 6 from below upper angle; stalk of 7, 8, 9 from the angle; 7 from $\frac{1}{2}$ of 8; 9 from $\frac{3}{4}$ of 8; 10 from upper median as far from the stalk as 6, parallel to stalk and 9; 11 from lower median at $\frac{3}{4}$, parallel to 12; 12 parallel to costa for $\frac{3}{4}$ of its length.

Hind wing semicircular; costa nearly straight; termen, inner margin, apex, and tornus much rounded; 1*a* rather long; 1*b* somewhat curved; 2 from a little beyond $\frac{1}{2}$ lower median; 3 from $\frac{3}{4}$ 2 to 4; 4 from lower angle; 5 from 4 as far as 4 is from 3; discocellular indistinct; cell as long as $\frac{1}{2}$ of wing; 6 and 7 stalked for $\frac{1}{3}$ and from upper angle; 8 anastomosing with upper median for nearly $\frac{1}{3}$.

Species in South Africa:—

1. *a.* Fore wing with an orange rounded spot at end of cell. *monosticta*.
- b.* Fore wing with no spot in cell. 2.
2. *a.* Vertex of head white; fore wing with vein 6 from angle of cell; hind wing with vein 5 from just above the angle. *usebria*.
- b.* Vertex of head orange; fore wing with vein 6 from below angle of cell; hind wing with vein 5 from well above the angle. *plumosa*.

Pteredoa monosticta, Butl., P. Z. S. L., p. 428, pl. XXXII, fig. 7 (1898).

Euproctis monosticta, Hmps., Ann. S. A. Mus., p. 408 (1905).

Hab. Pretoria (II, Munro; bred).

Johannesburg (II, Platt).

Waterval Onder (XI, Janse).

Pinetown (I, Leigh).

Durban (I, II, IV, Leigh).

I have not seen *usebria* nor *plumosa*, but I have no doubt that *monosticta* is rightly placed in this genus, though Hampson places it in *Euproctis*. The ten specimens I examined show great constancy in the running of vein 10 of fore wing and none have a tendency to form an areole. The only characters in which *monosticta* does not fit with the

description by Hampson are that the branches of the antennæ are not *extremely* long, and that 5 of fore wing is from well above the angle and not *near* the angle.

It would have to come in Hampson's Section II, though the process of the fore leg is not long and arises from about $\frac{1}{5}$ of tibia and not from base.

Species *auctorum* :—

Pteredoa usebria, Swinh., Trans. Ent. Soc., p. 382 (1903).

Hmpsn., Ann. S.A. Mus., p. 412 (1905).

Pteredoa plumosa, Hmpsn., Ann. S.A. Mus., p. 412 (1905).

Genera *auctorum* :—

Cymaroa leptopepla, Hmpsn., Ann. S.A. Mus., p. 410 (1905).

Rhyopteryx sordida, Auriv., Öfv. Ak. Förh., XXXVI (7), p. 57 (1879).

Homœomeria flavicapilla, Wllgrn., Wien. Ent. Mon., IV, p. 163 (1860).

Wllgrn., K. Vet. Akad. Handl. (2), V (4),
p. 36 (1865).

Cataphractes boldingii, Feld., Reis. Nov. pl. XCIX, fig. 8 (1874).

Kirby, Cat., p. 446 (1898).

Hmpsn., Ann. S.A. Mus., p. 412 (1905).

Oreinobia scurrilis, Wllgrn., Wien. Ent. Mon., IV, p. 163 (1860).

Wllgrn., K. Vet. Akad. Handl. (2), V (4), p. 34
(1865).